

Compilation of Changes to the CPC Scheme Between 2020.05 and 2020.08

Presentation Details

Entries for new symbols and headings:	<i>Black text in italics</i>
Entries for existing symbols and headings	
—text insertions:	<i>Green text in italics with yellow background</i>
—text deletions:	Red strikethrough text with grey background
Entries for deleted symbols and headings:	Black strikethrough text

- In cases when the originating project cannot be found, "N/A" is given for the Project information (e.g. the change could be due to an Editorial Correction).
- Projects ending in "-F" indicate finalisation after reclassification was completed.

Project: MP0456 (A01B)

- M A01B 43/00** Gatherers for removing stones, undesirable roots or the like from the soil, e.g. tractor-drawn rakes ~~{{for harvesting root crops A01D}}~~
- U A01B 49/00** Combined machines (auxiliary devices attached to machines of a different kind, e.g. harrows attached to ploughs, see the relevant groups for the machines)
- M A01B 49/04** • Combinations of soil-working tools with non-soil-working tools, e.g. planting tools ~~{{seeding machines A01C 7/00; harvesters combined with soil-working implements A01D 43/12}}~~
- M A01B 69/00** Steering of agricultural machines or implements; Guiding agricultural machines or implements on a desired track ~~(vehicle course control in general G05D 1/02)~~

NOTE

In this group it is obligatory to classify subject-matter in the first appropriate place. It is however allowed to apply multiple classification where considered useful for search

Project: MP0456 (A01C)

- M A01C 5/00** Making or covering furrows or holes for sowing, planting or manuring *(ploughs for making ridges A01B 13/02)*
- M A01C 5/06** • Machines for making or covering drills or furrows for sowing or planting ~~{{seeders depositing seeds in rows A01C 7/08; ploughs for making ridges A01B 13/02; {lifting devices for agricultural machines A01B 63/00}}~~

Project: MP0456 (A01D)

- M A01D** HARVESTING; MOWING ~~{{parts, details or accessories of agricultural machines or implements in general A01B 51/00 – A01B 75/00}}~~

NOTES

1. This subclass covers the shredding or pulverising of stubble, e.g. for the purpose of producing mulch, but does not cover other mechanical destruction of unwanted vegetation, which is covered by group [A01M 21/02](#)
2. In this subclass, in groups [A01D 34/00](#), [A01D 42/00](#), [A01D 43/00](#), [A01D 57/00](#), [A01D 67/00](#), [A01D 69/00](#) and [A01D 75/00](#), it is desirable to add the indexing code of group [A01D 2101/00](#)

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

- M A01D 3/00** Non-abrasive sharpening devices for scythes, sickles or the like ~~(abrasive or similar sharpening devices B24D 15/06)~~
- M A01D 5/00** Containers for whetstones for use during harvesting ~~(whetting implements B24D 15/00)~~
- M A01D 7/00** Rakes (mowers convertible to rakes or capable of raking [A01D 42/02](#); mowers combined with rakes [A01D 43/02](#); ~~haymakers, crop conditioners A01D 76/00 – A01D 84/00; {making rakes from sheet metal B21D 53/68; making rakes by rolling B21H 7/08}~~)
- U A01D 23/00** Topping machines
- M A01D 23/04**
 - cutting the tops after being lifted ~~(processing of harvested produce in bulk A01F 29/00, A23N)~~
- U A01D 34/00** Mowers (combined with apparatus performing additional operations while mowing [A01D 37/00](#) - [A01D 41/00](#), [A01D 43/00](#); convertible to apparatus for purposes other than mowing or capable of performing operations other than mowing [A01D 42/00](#)); Mowing apparatus of harvesters
- U A01D 34/01**
 - characterised by features relating to the type of cutting apparatus
- U A01D 34/412**
 - having rotating cutters
- U A01D 34/42**
 - having cutters rotating about a horizontal axis, e.g. cutting-cylinders
- M A01D 34/46**
 - hand-guided by a walking operator ~~(A01D 34/43 takes precedence)~~
- U A01D 34/835**
 - specially adapted for particular purposes
- M A01D 34/84**
 - for edges of lawns or fields, e.g. for mowing close to trees or walls ~~(for embankments A01D 34/86 takes precedence; }~~ ~~hand-held edge trimmers A01G 3/06; }~~ ~~edge trimmers A01G 3/00)~~
- M A01D 37/00** Reaper-binders ~~(features relating to mowing only A01D 34/00, to binding only A01D 39/00; equipment thereon for binding harvested produce, e.g. knotters, A01D 59/00; {bundling articles B65B 13/00})~~
- M A01D 37/02**
 - with receiving platform and binding apparatus but without elevating canvases ~~{(knotting D04G)}~~
- M A01D 37/04**
 - conveying the stalks in vertical position ~~{(delivering devices for standing stalks A01D 57/22)}~~
- M A01D 37/06**
 - binding with stalks or straw bands ~~{(implements for laying-out bands for sheaves A01D 75/16)}~~
- M A01D 41/00** Combines, i.e. harvesters or mowers combined with threshing devices ~~(threshing devices for combines A01F 7/00 – A01F 12/00)~~
- U A01D 43/00** Mowers combined with apparatus performing additional operations while mowing ([A01D 37/00](#), [A01D 39/00](#), [A01D 41/00](#), take precedence)
- M A01D 43/06**
 - with means for collecting, gathering or loading mown material ~~{(A01D 43/086 takes precedence; for hay or the like A01D 87/00)}~~
- M A01D 43/08**
 - with means for cutting up the mown crop {, e.g. forage harvesters ~~(threshing machines having chaff-cutters A01F 12/40; cutting apparatus of chaff-cutters or of apparatus for cutting up mown crop A01F 29/00)}~~
- M A01D 43/10**
 - with means for crushing or bruising the mown crop ~~{(stalk crushers or bruisers per se for standing stalks or stubbles A01D 34/8355, for mown crop A01D 82/00, for straw A01F 12/40)}~~
- M A01D 59/00** Equipment for binding harvested produce (specially adapted for baling presses [A01F 15/14](#); ~~bundling articles for packaging in general B65B 13/00~~)
- M A01D 59/12**
 - Containers for the twine ~~(twine balls or their manufacture B65H)~~

- M A01D 61/00** Elevators or conveyors for binders or combines ~~(({conveying in general B65G; hoisting, lifting in general B66})}~~
- U A01D 75/00** Accessories for harvesters or mowers
- M A01D 75/08** • Sharpening apparatus fixed to the harvester or mower ~~(sharpening machines or devices per se B24B, B24D)~~
- M A01D 75/18** • Safety devices for parts of the machines ~~(safety devices in general F16P)~~
- M A01D 75/20** • Devices for protecting men or animals ~~(safety devices in general F16P)~~
- M A01D 87/00** Loaders for hay or like field crops (combined with mowers [A01D 43/06](#); ~~loading in forage silos A01F 25/18; }~~; ~~loading in general B65G, B66~~)
- M A01D 87/08** • with sweep rakes {, i.e. buck-rakes, e.g. transporting rakes ~~(gripping or clamping devices A01D 87/003; fork loaders A01D 87/0053)}~~
- M A01D 87/10** • with blowers ~~(({blowing and conveying B65G 53/00; loading or distributing arrangements in forage silos A01F 25/18})}~~
- M A01D 90/00** Vehicles for carrying harvested crops with means for selfloading or unloading (combined with mowers [A01D 43/06](#); ~~load transporting vehicles modified to facilitate loading in general B60P; bucket cars, i.e. having scraper bowls E02F 3/64~~)
- M A01D 90/02** • Loading means ~~(({loaders A01D 87/00; pick-ups A01D 89/00})}~~
- M A01D 90/10** • Unloading means ~~(({manure distributors A01C 3/06})}~~

Project: MP0456 (A01F)

- M A01F 3/00** Hand-operated implements for cutting-up straw, hay or the like (mechanically-driven straw cutters [A01F 29/00](#); ~~cutting in general B26~~)
- M A01F 15/00** Baling presses for straw, hay or the like ~~(({making compressed stacks A01D 85/00})}~~
- U A01F 15/08** • Details
- M A01F 15/10** • • Feeding devices for the crop material {; e.g. precompression devices ~~(pick-ups A01D 89/00)~~}
- M A01F 15/14** • • Tying devices specially adapted for baling presses ~~(({independent binders A01D 39/00})}~~

Project: MP0456 (A01G)

- U A01G 9/00** Cultivation in receptacles, forcing-frames or greenhouses (of mushrooms [A01G 18/00](#); soilless cultivation [A01G 31/00](#)); Edging for beds, lawn or the like
- WARNING
Group [A01G 9/00](#) is impacted by reclassification into groups [A01G 18/00](#), [A01G 18/60](#) and [A01G 9/28](#).
Groups [A01G 9/00](#), [A01G 18/00](#), [A01G 18/60](#) and [A01G 9/28](#) should be considered in order to perform a complete search.
- M A01G 9/14** • Greenhouses (cloches [A01G 13/04](#) ~~--; glazing bars, glazing clips therefor E04D 3/06~~)
- M A01G 9/22** • Shades or blinds for greenhouses, or the like ~~(({canopies A01G 13/0206})}~~
- M A01G 13/00** Protecting plants (apparatus for the destruction of vermin or noxious animals [A01M](#); use of chemical materials therefor, composition of protective materials, e.g. grafting wax, [A01N](#) ~~--; coverings around trees forming part of a road E01C 9/005~~)

- M A01G 13/02 · Protective coverings for plants; ~~{Coverings for the ground;}~~ Devices for laying-out {or removing} coverings ~~{{covering materials A01G 9/1438}}~~
- M A01G 13/04 · · Cloches {, i.e. protective full coverings for individual plants (~~dismountable or portable greenhouses A01G 9/16;~~ individual canopies [A01G 13/0212](#))}

Project: MP0465 (A01K)

- U A01K 1/00 Housing animals; Equipment therefor**
- M A01K 1/015 · Floor coverings, e.g. bedding-down sheets {; Stable floors ~~(for poultry cages A01K 31/007)}~~
- M A01K 1/12 · Milking stations ~~(devices for milking A01J 1/00 -- A01J 9/00)~~
- U A01K 5/00 Feeding devices for stock or game ([A01K 1/10](#) takes precedence; feeding devices for poultry or other birds [A01K 39/00](#)); Feeding wagons; Feeding stacks}**
- U A01K 5/01 · Feed troughs; Feed pails ~~{{(A01K 1/10 takes precedence)}~~
- U A01K 5/0114 · · {Pet food dispensers; Pet food trays (time-controlled [A01K 5/0291](#))}
- M A01K 5/0128 · · · {Pet feeders ~~with liners~~ *including liners; liners therefor; Means for holding liners to pet feeders*}
- U A01K 5/02 · Automatic devices ~~{{(automatic identification devices for stock [A01K 11/006](#))}~~
- M A01K 5/025 · · · {with ~~access to feeding place or trough only possible through access doors or lids to be opened by the animal~~ *doors or lids activated by the animals to access feeding place or trough*}
- U A01K 7/00 Watering equipment for stock or game**
- U A01K 7/02 · Automatic devices {; Medication dispensers}
- M A01K 7/06 · · actuated by the animal ~~{through valve control (for poultry [A01K 39/0213](#))}~~
- U A01K 13/00 Devices for grooming or caring of animals, e.g. curry-combs; Fetlock rings; Tail-holders (as part of the harness [B68B 5/04](#)); Devices for preventing crib-biting; Washing devices; Protection against weather conditions or insects**
- M A01K 13/002 · {Curry-combs; ~~Shearing sheep chemically~~ *Brushes* (shearing sheep [B26B 19/24](#))}
- U A01K 15/00 Devices for taming animals, e.g. nose-rings or hobbles; Devices for overturning animals in general; Training or exercising equipment; Covering boxes**
- M A01K 15/02 · Training or exercising equipment, e.g. mazes or labyrinths for animals ([A01K 15/04](#) takes precedence){; Electric shock devices (circuits therefor [H03K 3/537](#)); Toys, ~~e.g. for pets~~ *especially adapted for animals*}
- M A01K 15/025 · · {Toys, ~~e.g. for chewing~~ *especially adapted for animals*}
- M A01K 15/029 · · {Electric or similar shock devices, e.g. prods ~~(circuits therefor [H03K 3/537](#))}~~
- M A01K 23/00 Manure or urine pouches ~~{{(picking up dog excrement from the ground [E01H 1/1206](#))}~~**
- M A01K 29/00 Other apparatus for animal husbandry ~~{{(detecting birth of animals [A61D 17/00](#))}~~**
- U A01K 29/005 · {Monitoring or measuring activity, e.g. detecting heat or mating}
- U A01K 31/00 Housing birds**
- M A01K 31/002 · {Poultry cages, e.g. transport boxes (~~poultry transport [A01K 45/005](#)~~ *Harvesting or transport of poultry [A01K 45/005](#)*)}
- M A01K 31/10 · Doors; Trap-doors ~~{{(for laying-nests [A01K 31/16](#))}~~
- U A01K 31/14 · Nest-boxes {, e.g. for singing birds or the like}

- M A01K 31/16 · · Laying-nests for poultry; Egg collecting ~~-(nest floors A01K 31/007)}~~
- M A01K 89/00 Reels ~~(devices for casting lines A01K 91/02)~~

Project: RP0336-F (A47J)

- U A47J 19/00 **Household machines for straining foodstuffs; Household implements for mashing or straining foodstuffs (for foodstuffs in bulk [A23N](#))**
- M A47J 19/02 · Citrus fruit squeezers; Other fruit juice extracting devices
WARNING
 Group A47J 19/02 is incomplete pending reclassification of documents from group A47J 19/022.
 Group A47J 19/02 is also impacted by reclassification into groups A47J 19/023 and A47J 19/025.
 All groups listed in this Warning should be considered in order to perform a complete search.
- D A47J 19/022 · · {Hand devices}
 —(Frozen)
WARNING
 Group A47J 19/022 is no longer used for the classification of documents as of August 1, 2018.
 The content of this is being reclassified into groups A47J 19/023 and A47J 19/02.
 Groups A47J 19/022, A47J 19/023 and A47J 19/02 should be considered in order to perform a complete search.
- M A47J 19/023 · · {including a pressing cone or reamer}
WARNING
 Group A47J 19/023 is incomplete pending reclassification of documents from groups A47J 19/02 and A47J 19/022.
 Groups A47J 19/02, A47J 19/022 and A47J 19/023 should be considered in order to perform a complete search.
- M A47J 19/025 · · {including a pressing screw}
WARNING
 Group A47J 19/025 is incomplete pending reclassification of documents from group A47J 19/02.
 Groups A47J 19/02 and A47J 19/025 should be considered in order to perform a complete search.
- U A47J 27/00 **Cooking-vessels ([A47J 29/00](#) - [A47J 33/00](#) take precedence)**
- U A47J 27/56 · Preventing boiling over, e.g. of milk (appliances for preventing or destroying foam in dairy apparatus for treating milk [A01J 11/02](#))
- M A47J 27/62 · · by devices for automatically controlling the heat supply by switching off heaters or for automatically lifting the cooking-vessels
WARNING
 Group A47J 27/62 is impacted by reclassification into groups A47J 36/32 and A47J 36/321.
 Groups A47J 27/62, A47J 36/32 and A47J 36/321 should be considered in order to perform a complete search.

- U A47J 31/00** Apparatus for making beverages (household machines or implements for straining foodstuffs [A47J 19/00](#); preparation of non-alcoholic beverages, e.g. by adding ingredients to fruit or vegetable juices, [A23L 2/00](#); coffee or tea pots [A47G 19/14](#); tea infusers [A47G 19/16](#); brewing of beer [C12C](#); preparation of wine or other alcoholic beverages [C12G](#))
- U A47J 31/44** • Parts or details {or accessories} of beverage-making apparatus (filters or strainers [A47J 31/06](#))
- M A47J 31/46** • • Dispensing spouts, pumps, drain valves or like liquid transporting devices
- WARNING**
Group A47J 31/46 is impacted by reclassification into groups A47J 31/461, A47J 31/468 and A47J 31/469.
Groups A47J 31/46, A47J 31/461, A47J 31/468 and A47J 31/469 should be considered in order to perform a complete search.
- M A47J 31/461** • • • {Valves, e.g. drain valves}
- WARNING**
Group A47J 31/461 is incomplete pending reclassification of documents from group A47J 31/46.
Groups A47J 31/46 and A47J 31/461 should be considered in order to perform a complete search.
- M A47J 31/468** • • • {Pumping means}
- WARNING**
Group A47J 31/468 is incomplete pending reclassification of documents from group A47J 31/46.
Groups A47J 31/46 and A47J 31/468 should be considered in order to perform a complete search.
- M A47J 31/469** • • • {Details of hydraulic circuits}
- WARNING**
Group A47J 31/469 is incomplete pending reclassification of documents from group A47J 31/46.
Groups A47J 31/46 and A47J 31/469 should be considered in order to perform a complete search.
- M A47J 31/52** • • Alarm-clock-controlled mechanisms for coffee- or tea-making apparatus {; Timers for coffee- or tea-making apparatus; Electronic control devices for coffee- or tea-making apparatus}
- WARNING**
Group A47J 31/52 is impacted by reclassification into groups A47J 31/521, A47J 31/525, A47J 31/5251, A47J 31/5253 and A47J 31/5255.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A47J 31/521** • • • {the electronic control being performed over a network, e.g. by means of a computer or a handheld device}
- WARNING**
Group A47J 31/521 is incomplete pending reclassification of documents from group A47J 31/52.
Groups A47J 31/52 and A47J 31/521 should be considered in order to perform a complete search.

- M A47J 31/525
- • • {the electronic control being based on monitoring of specific process parameters}
- WARNING
Group A47J 31/525 is incomplete pending reclassification of documents from group A47J 31/52.
Groups A47J 31/52 and A47J 31/525 should be considered in order to perform a complete search.
- M A47J 31/5251
- • • {of pressure}
- WARNING
Group A47J 31/5251 is incomplete pending reclassification of documents from group A47J 31/52.
Groups A47J 31/52 and A47J 31/5251 should be considered in order to perform a complete search.
- M A47J 31/5253
- • • {of temperature}
- WARNING
Group A47J 31/5253 is incomplete pending reclassification of documents from group A47J 31/52.
Groups A47J 31/52 and A47J 31/5253 should be considered in order to perform a complete search.
- M A47J 31/5255
- • • {of flow rate}
- WARNING
Group A47J 31/5255 is incomplete pending reclassification of documents from group A47J 31/52.
Groups A47J 31/52 and A47J 31/5255 should be considered in order to perform a complete search.
- U A47J 36/00**
- Parts, details or accessories of cooking-vessels ([A47J 27/00](#) - [A47J 33/00](#) take precedence insofar as these parts, details or accessories are restricted to a particular kind of cooking-vessel provided for in a single one of these groups)**
- M A47J 36/32
- Time-controlled igniting mechanisms or alarm devices {; Electronic control devices (in egg-cookers [A47J 29/02](#); in coffee-makers [A47J 31/52](#); in bread-toasters [A47J 37/0814](#))}
- WARNING
Group A47J 36/32 is incomplete pending reclassification of documents from group A47J 27/62.
Group A47J 36/32 is also impacted by reclassification into group A47J 36/321.
Groups A47J 36/32, A47J 27/62 and A47J 36/321 should be considered in order to perform a complete search.
- M A47J 36/321
- {the electronic control being performed over a network, e.g. by means of a handheld device}
- WARNING
Group A47J 36/321 is incomplete pending reclassification of documents from groups A47J 36/32 and A47J 27/62.
Groups A47J 36/32, A47J 27/62 and A47J 36/321 should be considered in order to perform a complete search.

Project: RP0152 (A61B)

- M A61B 6/00 Apparatus for radiation diagnosis, e.g. combined with radiation therapy equipment (~~analysis of materials using radiation G01N 23/00, detecting hidden objects by radiation G01V 5/0008, radiodiagnostic or X-ray contrast preparations A61K 49/00, radiation therapy per se A61N 5/00; instruments measuring radiation intensity for application in the field of nuclear medicine, e.g. in vivo counting, G01T 1/161; apparatus for taking X-ray photographs G03B 42/02; X-ray photographic processes G03C 5/16; irradiation devices G21K; X-ray apparatus or circuits therefor H05G 1/00~~)
- NOTE**
 {In this group the following terms or expressions are used with the meaning indicated:
 • "radiation" means ionising radiation, e.g. X rays or gamma rays, and does not cover other forms of radiation, e.g. optical
 }
- C A61B 6/02 • Devices for diagnosis sequentially in different planes; Stereoscopic radiation diagnosis
- WARNING**
 Group A61B 6/02 is impacted by reclassification into group A61B 6/4429. Groups A61B 6/02 and A61B 6/4429 should be considered in order to perform a complete search.
- M A61B 6/03 • • Computerised tomographs (~~{diagnosis by magnetic resonance imaging A61B 5/055;}~~ echo-tomography A61B 8/14)
- M A61B 6/037 • • • {Emission tomography (~~detector details for PET G01T 1/2985, detector details for SPECT G01T 1/1644~~)}
- U A61B 6/04 • Positioning of patients; Tilttable beds or the like (operating tables A61G 13/00; operating chairs A61G 15/00)
- M A61B 6/0407 • • {~~Tables or beds~~ Supports, e.g. tables or beds, for the body or parts of the body}
- M A61B 6/0414 • • • {~~Tables or beds~~ with compression means}
- M A61B 6/0421 • • • {~~Tables or beds~~ with immobilising means}
- M A61B 6/0435 • • • {~~Tables or beds~~ with means for imaging suspended breasts}
- M A61B 6/0442 • • • {~~Tables or beds made from~~ made of non-metallic materials}
- M A61B 6/045 • • • {~~Tables or beds~~ with heating or cooling means}
- D A61B 6/0457 • • {~~Servo-controlled positioning~~
 <administratively transferred to A61B 6/0487>
- M A61B 6/0464 • • • {~~Supports~~ mounted to ceiling}
- M A61B 6/0471 • • • {~~Endless-band supports~~ based on an endless-band}
- M A61B 6/0478 • • • {~~Patient positioning chairs~~ Chairs}
- U A61B 6/0485 • • {Inflatable rests for lifting of patients}
- N A61B 6/0487 • • {~~Motor-assisted positioning~~}
- M A61B 6/06 • Diaphragms (~~for particular diagnostic applications, e.g. tomography, i.e. not of general applicability (diaphragms, e.g. variable, or collimators in general G21K 1/02)~~)
- M A61B 6/10 • Application or adaptation of safety means (~~protection against dangerous radiation in general G21F~~)
- M A61B 6/107 • • {Protection against radiation, e.g. shielding (~~techniques for handling radiation not otherwise provided for G21K~~)}

- M A61B 6/12 · Devices for detecting or locating foreign bodies ([A61B 6/02](#) takes precedence; ~~radio-opaque markers A61B 90/39~~)
- U A61B 6/14 · Applications or adaptations for dentistry
- M A61B 6/145 · {by intraoral means (~~X-ray tubes having a small cross-section to facilitate introduction into small cavities H01J 35/32~~)}
- M A61B 6/40 · {with arrangements for generating radiation specially adapted for radiation diagnosis (~~X-ray tubes or details thereof H01J 35/00~~)}
- M A61B 6/4007 · {characterised by using a plurality of source units (~~circuit arrangements driving apparatuses comprising more than one X ray tube H05G 1/70~~)}
- M A61B 6/4035 · {the source being combined with a filter or grating (~~filters for radiation per se G21K 1/10~~)}
- M A61B 6/405 · {Source units *specially* adapted to modify characteristics of the beam during the data acquisition process ([A61B 6/4021](#), [A61B 6/4035](#) take precedence; ~~arrangements changing the time structure of an already generated radiation beam G21K 1/043~~)}
- M A61B 6/4057 · {by using ~~a source unit~~ *radiation sources located* in the interior of the body ([A61B 6/037](#) takes precedence; ~~X-ray tubes with small cross-section H01J 35/32~~)}
- M A61B 6/4064 · {*specially* adapted for producing a particular type of beam}
- M A61B 6/42 · {with arrangements for detecting radiation specially adapted for radiation diagnosis (~~details of radiation detection G01T 1/00~~)}
- U A61B 6/4208 · {characterised by using a particular type of detector}
- M A61B 6/4216 · · {using storage phosphor screens (~~details of stimuable phosphor sheets G01T 1/2012~~)}
- M A61B 6/4233 · · {using matrix detectors (~~for semiconductor radiation detectors G01T 1/24, G01T 1/2928~~)}
- M A61B 6/4241 · · {using energy resolving detectors, e.g. photon counting (~~detectors for nuclear medicine G01T 1/16, G01T 1/29~~)}
- M A61B 6/425 · · {using detectors *specifically specially* adapted to be used in the interior of the body (~~detector details for in vivo counting G01T 1/161~~)}
- T A61B 6/4283 · {characterised by a detector unit being housed in a cassette}

WARNING

*Group A61B 6/4283 is incomplete pending reclassification of documents from group A61B 6/4411.
Groups A61B 6/4411 and A61B 6/4283 should be considered in order to perform a complete search.*

- M A61B 6/44 · {Constructional features of ~~the device~~ *apparatus* for radiation diagnosis}
- M A61B 6/4405 · {the ~~device being mobile or portable, e.g. mounted on a trolley or handheld~~ *apparatus being movable or portable, e.g. handheld or mounted on a trolley*}
- C A61B 6/4411 · {the ~~device being modular~~ *apparatus being modular* ([A61B 6/4283](#) takes precedence)}

WARNING

*Group A61B 6/4411 is impacted by reclassification into group A61B 6/4283.
Groups A61B 6/4411 and A61B 6/4283 should be considered in order to perform a complete search.*

- T A61B 6/4429
- {related to the mounting of source units and detector units (~~A61B 6/02 takes precedence~~)}
- WARNING**
*Group A61B 6/4429 is incomplete pending reclassification of documents from group A61B 6/02.
 Groups A61B 6/02 and A61B 6/4429 should be considered in order to perform a complete search.*
- M A61B 6/4476
- {related to ~~servo-controlled movement~~*motor-assisted motion* of the source unit}
- U A61B 6/46
- {with special arrangements for interfacing with the operator or the patient}
- U A61B 6/461
- {Displaying means of special interest}
- M A61B 6/465
- • {adapted to display user selection data, e.g. *graphical user interface*, icons or menus}
- M A61B 6/466
- • {adapted to display 3D data (~~3D image rendering G06T 15/00; manipulating 3D models for computer graphics G06T 19/00~~)}
- M A61B 6/48
- {Diagnostic techniques ([A61B 6/022](#), [A61B 6/025](#) [A61B 6/032](#), [A61B 6/037](#) take precedence)}
- M A61B 6/52
- {Devices using data or image processing specially adapted for radiation diagnosis (~~image processing per se G06T~~)}
- U A61B 6/5211
- {involving processing of medical diagnostic data}
- M A61B 6/5217
- • {extracting a diagnostic or physiological parameter from medical diagnostic data (~~details of algorithms to analyse biomedical images G06T 7/0012~~)}
- M A61B 6/5229
- • {combining image data of a patient, e.g. combining a functional image with an anatomical image (~~details of algorithms for image registration G06T 7/30~~)}
- M A61B 6/5235
- • • {combining images from the same or different *ionising* radiation imaging techniques, e.g. PET and CT}
- M A61B 6/5241
- • • • {combining overlapping ~~radiation images~~*images of the same imaging modality*, e.g. by stitching}
- M A61B 6/5247
- • • • {combining images from ~~different diagnostic modalities~~*an ionising-radiation diagnostic technique and a non-ionising radiation diagnostic technique*, e.g. X-ray and ultrasound}
- M A61B 6/5258
- {involving detection or reduction of artifacts or noise (~~details of algorithms for image enhancement G06T 7/97~~)}
- U A61B 6/5264
- • • {due to motion}
- M A61B 6/527
- • • • {using data from a motion artifact sensor (~~A61B 6/5276 takes precedence~~)}
- M A61B 6/54
- {Control of *apparatus or* devices for radiation diagnosis}
- M A61B 6/547
- {involving tracking of position of the device or parts of the device (~~using an image of a phantom A61B 6/584~~)}
- M A61B 6/548
- • {Remote control of ~~radiation diagnosis~~*the apparatus or* devices}
- U A61B 6/56
- {Details of data transmission or power supply, e.g. use of slip rings}
- M A61B 6/566
- • {involving communication between *imaging diagnostic* systems}
- M A61B 6/58
- {Testing, adjusting or calibrating *apparatus or* devices for radiation diagnosis}
- M A61B 6/581
- • {Remote testing of the ~~device~~*apparatus or devices*}
- U A61B 6/582
- • {Calibration}
- M A61B 6/583
- • • {using calibration phantoms (~~models for medical purposes G09B 23/28~~)}
- M A61B 6/584
- • • • {determining position of components of the *apparatus or* device using images of the phantom}

Project: RP0449-F (A61H)

- U A61H 9/00** **Pneumatic or hydraulic massage**
- M A61H 9/0021 · {Hydraulic massage}
- WARNING**
 Group A61H 9/0021 is incomplete pending reclassification of documents from group A61H 9/0028.
 Group A61H 9/0021 is also impacted by reclassification into group A61H 9/0028.
 Groups A61H 9/0021 and A61H 9/0028 should be considered in order to perform a complete search.
- M A61H 9/0028 · · {Hand-held devices for spraying and removing liquid while moved on the skin}
- WARNING**
 Group A61H 9/0028 is incomplete pending reclassification of documents from group A61H 9/0021.
 Group A61H 9/0028 is also impacted by reclassification into group A61H 9/0021.
 Groups A61H 9/0028 and A61H 9/0021 should be considered in order to perform a complete search.

Project: MP0358 (A61K)

- U A61K 31/00** **Medicinal preparations containing organic active ingredients**
- NOTES**
1. When classifying in groups [A61K 31/00](#) - [A61K 41/00](#) the symbol [A61K 2300/00](#) may be added, using Combination Sets, to indicate a mixture of active ingredients.
 2. In the preparation of new organic compounds and their use in medicinal preparations, classification is only made in the relevant subclasses [C07C](#) - [C07J](#) according to the type of compound. However, the inventions dealing with medicinal preparations containing at least two active organic ingredients are always classified in this group in addition to the classification for the type of compounds in [C07C](#) - [C07J](#).
 3. Attention is drawn to the notes in class [C07](#), particularly to the definition of steroids given in Note (1) following the title of [C07J](#) and to the definition of carbohydrates and sugars given in the notes following the title of [C07H](#).
 4. Salts and complexes of organic active compounds are always classified according to the free active compounds. If a complex is formed between two or more active compounds, then they are classified according to all compounds forming the salts or complexes followed by the symbol [A61K 2300/00](#) (i.e. as a mixture of active organic compounds). According to the last place rule, organic active compounds forming salts with heavy metals should be classified in [A61K 33/24](#) - [A61K 33/38](#) and not in subgroups [A61K 31/28](#) - [A61K 31/32](#), [A61K 31/555](#) or [A61K 31/714](#).
 This does not apply to complexes, as apparent from the [A61K 31/00](#) scheme, wherein the complexes hemin and hematin are classified in [A61K 31/555](#) and cyanocobalamin in [A61K 31/714](#).
 5. From January 2003 onwards, the EPO copies into CPC the IPC classification of the first document received (family representative). However, blends of active ingredients receive the additional symbol [A61K 2300/00](#) as Combination Set.
- U A61K 31/63 · Compounds containing para-N-benzenesulfonyl-N-groups, e.g. sulfanilamide, p-nitrobenzenesulfonyl hydrazide
- M A61K 31/635 · · having a heterocyclic ring, e.g. **sulfasalazine****sulfadiazine**

Project: RP0583 (A61L)

M A61L METHODS OR APPARATUS FOR STERILISING MATERIALS OR OBJECTS IN GENERAL; DISINFECTION, STERILISATION, OR DEODORISATION OF AIR; CHEMICAL ASPECTS OF BANDAGES, DRESSINGS, ABSORBENT PADS, OR SURGICAL ARTICLES; MATERIALS FOR BANDAGES, DRESSINGS, ABSORBENT PADS, OR SURGICAL ARTICLES (preservation of bodies or disinfecting characterised by the agent employed [A01N](#); preserving, e.g. sterilising, food or foodstuffs [A23](#); preparations for medical, dental or toilet purposes [A61K](#); preparation of ozone [C01B 13/10](#))

NOTE

In groups [A61L 2/00](#) - [A61L 12/00](#), it is desirable to add the indexing codes of groups {[A61L 2101/00](#) - [A61L 2101/50](#)}.

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

[A61L 33/10](#) covered by [A61L 33/0011](#)

[A61L 33/14](#) covered by [A61L 33/0011](#)

[A61L 33/16](#) covered by [A61L 33/0047](#)

~~[A61L 101/00](#)-[A61L 101/56](#)~~ covered by ~~[A61L 2300/00](#)-[A61L 2300/802](#)~~

~~2. IPC7 groups [A61L 2/07](#) and subgroups, and [A61L 9/012](#) - [A61L 9/014](#) might be incomplete as relevant documents might still be classified in the hierarchical higher groups~~

~~3-2. {In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}~~

N [A61L 2101/00](#) - [A61L 2101/00](#) ***Indexing scheme associated with groups [A61L 2/00](#) - [A61L 12/00](#), relating to the chemical composition of the materials used in disinfecting, sterilizing or deodorizing.***

N [A61L 2101/00](#) ***Chemical composition of materials used in disinfecting, sterilising or deodorising***

- N [A61L 2101/02](#) · Inorganic materials
- N [A61L 2101/06](#) · · containing halogen
- N [A61L 2101/08](#) · · · Elemental halogen
- N [A61L 2101/12](#) · · containing silicon
- N [A61L 2101/14](#) · · containing sulfur
- N [A61L 2101/16](#) · · containing phosphorus
- N [A61L 2101/18](#) · · Ammonia
- N [A61L 2101/20](#) · · Acids
- N [A61L 2101/24](#) · · containing aluminium
- N [A61L 2101/26](#) · · containing copper
- N [A61L 2101/28](#) · · containing iron
- N [A61L 2101/30](#) · · containing zinc
- N [A61L 2101/32](#) · Organic compounds
- N [A61L 2101/34](#) · · Hydroxy compounds
- N [A61L 2101/36](#) · · Carboxylic acids or derivatives thereof
- N [A61L 2101/38](#) · · Ethers
- N [A61L 2101/40](#) · · containing sulfur
- N [A61L 2101/42](#) · · Organo-metallic compounds or complexes

- N A61L 2101/44 • • Heterocyclic compounds
- N A61L 2101/46 • • Macromolecular compounds
- N A61L 2101/48 • • • obtained by reactions only involving carbon-to-carbon unsaturated bonds
- N A61L 2101/50 • • • Polysaccharides or derivatives thereof

Project: RP0129-F (A61M)

- M A61M 35/00 **Devices for applying {, e.g. spreading,} media, e.g. remedies, on the human body (devices for handling toilet or cosmetic substances [A45D](#); absorbent pads, e.g. swabs {for medical use}, [A61F 13/15](#))**

WARNING

Group A61M 35/00 is impacted by reclassification into groups A61M 35/10, A61M 35/20, A61M 35/25, and A61M 35/30.

All groups listed in this Warning should be considered in order to perform a complete search.

- M A61M 35/10 • {Wearable devices, e.g. garments, glasses or masks}

WARNING

Group A61M 35/10 is incomplete pending reclassification of documents from group A61M 35/00.

Groups A61M 35/00 and A61M 35/10 should be considered in order to perform a complete search.

- M A61M 35/20 • {Non-portable devices, e.g. spraying booths}

WARNING

Group A61M 35/20 is incomplete pending reclassification of documents from group A61M 35/00.

Groups A61M 35/00 and A61M 35/20 should be considered in order to perform a complete search.

- M A61M 35/25 • • {specially adapted for the application of sunscreen, tanning or self-tanning lotions}

WARNING

Group A61M 35/25 is incomplete pending reclassification of documents from group A61M 35/00.

Groups A61M 35/00 and A61M 35/25 should be considered in order to perform a complete search.

- M A61M 35/30 • {Gas therapy for therapeutic treatment of the skin}

WARNING

Group A61M 35/30 is incomplete pending reclassification of documents from group A61M 35/00.

Groups A61M 35/00 and A61M 35/30 should be considered in order to perform a complete search.

Project: RP0127 (A63B)

- U A63B 33/00 **Swimming equipment attachable to the head, e.g. swim caps or goggles (diving masks [B63C 11/12](#); breathing aids, e.g. snorkels, [B63C 11/18](#))**

- C A63B 33/002 • {Swimming goggles ~~(with means covering the nostrils [B63C 11/12](#))~~}

WARNING

Group A63B 33/002 is impacted by reclassification into groups A63B 33/004, A63B 33/006, and A63B 33/008.

All groups listed in this Warning should be considered in order to perform a complete search.

- D A63B 2033/004
- {comprising two separate lenses joined by a flexible bridge}
- <administratively transferred to [A63B 33/004](#) INV>
- N A63B 33/004
- {comprising two separate lenses joined by a flexible bridge}
- WARNING
Group [A63B 33/004](#) is incomplete pending reclassification of documents from group [A63B 33/002](#).
Groups [A63B 33/002](#) and [A63B 33/004](#) should be considered in order to perform a complete search.
- N A63B 33/006
- {with means allowing adjustment of the bridge}
- WARNING
Group [A63B 33/006](#) is incomplete pending reclassification of documents from group [A63B 33/002](#).
Groups [A63B 33/002](#) and [A63B 33/006](#) should be considered in order to perform a complete search.
- D A63B 2033/006
- • {means allowing adjustment of the bridge}
- <administratively transferred to [A63B 33/006](#) INV>
- N A63B 33/008
- • {with stepless adjustment}
- WARNING
Group [A63B 33/008](#) is incomplete pending reclassification of documents from group [A63B 33/002](#).
Groups [A63B 33/002](#) and [A63B 33/008](#) should be considered in order to perform a complete search.
- D A63B 2033/008
- • • {stepless adjustment}
- <administratively transferred to [A63B 33/008](#) INV>
- M A63B 37/00
- Solid balls; ~~{Rigid hollow balls}; } Marbles (heavy throwing balls [A63B 65/06](#))~~**
- M A63B 37/0003
- {Golf balls ~~{for practising drives [A63B 69/3655](#), for practising putts [A63B 69/3688](#)}~~}
- C A63B 37/0004
- {Surface depressions or protrusions}
- WARNING
Group [A63B 37/0004](#) is impacted by reclassification into group [A63B 37/00215](#).
Groups [A63B 37/0004](#) and [A63B 37/00215](#) should be considered in order to perform a complete search.
- C A63B 37/0006
- • {Arrangement or layout of dimples}
- WARNING
Group [A63B 37/0006](#) is impacted by reclassification into group [A63B 37/00065](#).
Groups [A63B 37/0006](#) and [A63B 37/00065](#) should be considered in order to perform a complete search.
- N A63B 37/00065
- • • {located around the pole or the equator}
- WARNING
Group [A63B 37/00065](#) is incomplete pending reclassification of documents from group [A63B 37/0006](#).

Groups [A63B 37/0006](#) and [A63B 37/00065](#) should be considered in order to perform a complete search.

- C A63B 37/0021 . . . {Occupation ratio, i.e. percentage surface occupied by dimples}
WARNING
Group [A63B 37/0021](#) is impacted by reclassification into group [A63B 37/00215](#).
Groups [A63B 37/0021](#) and [A63B 37/00215](#) should be considered in order to perform a complete search.
- N A63B 37/00215 . . . {Volume ratio}
WARNING
Group [A63B 37/00215](#) is incomplete pending reclassification of documents from groups [A63B 37/0004](#) and [A63B 37/0021](#).
Groups [A63B 37/0004](#), [A63B 37/0021](#), and [A63B 37/00215](#) should be considered in order to perform a complete search.
- C A63B 37/0022 . . . {Coatings, ~~markings e.g. paint films~~(~~methods for marking A63B 45/02~~);
Markings}
WARNING
Group [A63B 37/0022](#) is impacted by reclassification into groups [A63B 37/00221](#), [A63B 37/00222](#), and [A63B 37/00223](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N A63B 37/00221 . . . {characterised by the material}
WARNING
Group [A63B 37/00221](#) is incomplete pending reclassification of documents from group [A63B 37/0022](#).
Groups [A63B 37/0022](#) and [A63B 37/00221](#) should be considered in order to perform a complete search.
- N A63B 37/00222 . . . {Physical properties, e.g. hardness}
WARNING
Group [A63B 37/00222](#) is incomplete pending reclassification of documents from group [A63B 37/0022](#).
Groups [A63B 37/0022](#) and [A63B 37/00222](#) should be considered in order to perform a complete search.
- N A63B 37/00223 . . . {Colour tone}
WARNING
Group [A63B 37/00223](#) is incomplete pending reclassification of documents from group [A63B 37/0022](#).
Groups [A63B 37/0022](#) and [A63B 37/00223](#) should be considered in order to perform a complete search.
- C A63B 37/0023 . . . {Covers}
WARNING
Group [A63B 37/0023](#) is impacted by reclassification into groups [A63B 37/00373](#) and [A63B 37/00376](#).
Groups [A63B 37/0023](#), [A63B 37/00373](#), and [A63B 37/00376](#) should be considered in order to perform a complete search.
- U A63B 37/0024 . . . {Materials other than ionomers or polyurethane}
- U A63B 37/0029 . . . {Physical properties}

- U A63B 37/0037 {Flexural modulus; Bending stiffness}
- N A63B 37/00373 {Colour tone}
- WARNING
Group [A63B 37/00373](#) is incomplete pending reclassification of documents from group [A63B 37/0023](#).
Groups [A63B 37/0023](#) and [A63B 37/00373](#) should be considered in order to perform a complete search.
- N A63B 37/00376 {Transparency or semitransparency}
- WARNING
Group [A63B 37/00376](#) is incomplete pending reclassification of documents from group [A63B 37/0023](#).
Groups [A63B 37/0023](#) and [A63B 37/00376](#) should be considered in order to perform a complete search.
- C A63B 37/0038 . . . {Intermediate layers, e.g. inner cover, outer core, mantle}
- WARNING
Group [A63B 37/0038](#) is impacted by reclassification into group [A63B 37/00495](#).
Groups [A63B 37/0038](#) and [A63B 37/00495](#) should be considered in order to perform a complete search.
- M A63B 37/0039 {**Special materials** characterised by the material}
- U A63B 37/004 {Physical properties}
- U A63B 37/0049 {Flexural modulus; Bending stiffness}
- N A63B 37/00495 {Colour tone}
- WARNING
Group [A63B 37/00495](#) is incomplete pending reclassification of documents from group [A63B 37/0038](#).
Groups [A63B 37/0038](#) and [A63B 37/00495](#) should be considered in order to perform a complete search.
- C A63B 37/005 . . . {Cores}
- WARNING
Group [A63B 37/005](#) is impacted by reclassification into group [A63B 37/00691](#).
Groups [A63B 37/005](#) and [A63B 37/00691](#) should be considered in order to perform a complete search.
- M A63B 37/0051 {**Special materials** Materials other than polybutadienes; **Special construction** **Constructional details**}
- U A63B 37/006 {Physical properties}
- C A63B 37/0062 {Hardness}
- WARNING
Group [A63B 37/0062](#) is impacted by reclassification into groups [A63B 37/00621](#) and [A63B 37/00622](#).
Groups [A63B 37/0062](#), [A63B 37/00621](#), and [A63B 37/00622](#) should be considered in order to perform a complete search.
- N A63B 37/00621 {Centre hardness}
- WARNING
Group [A63B 37/00621](#) is incomplete pending reclassification of documents from group [A63B 37/0062](#).

Groups [A63B 37/0062](#) and [A63B 37/00621](#) should be considered in order to perform a complete search.

N A63B 37/00622 {Surface hardness}

WARNING

Group [A63B 37/00622](#) is incomplete pending reclassification of documents from group [A63B 37/0062](#).

Groups [A63B 37/0062](#) and [A63B 37/00622](#) should be considered in order to perform a complete search.

M A63B 37/0069 {Flexural modulus}; **Bending stiffness**

N A63B 37/00691 . . . {Colour tone}

WARNING

Group [A63B 37/00691](#) is incomplete pending reclassification of documents from group [A63B 37/0069](#).

Groups [A63B 37/0069](#) and [A63B 37/00691](#) should be considered in order to perform a complete search.

U A63B 37/007 . . {Characteristics of the ball as a whole}

C A63B 37/0077 . . . {Physical properties}

WARNING

Group [A63B 37/0077](#) is impacted by reclassification into groups [A63B 37/00773](#) and [A63B 37/00776](#).

Groups [A63B 37/0077](#), [A63B 37/00773](#), and [A63B 37/00776](#) should be considered in order to perform a complete search.

N A63B 37/00773 {Moment of inertia}

WARNING

Group [A63B 37/00773](#) is incomplete pending reclassification of documents from group [A63B 37/0077](#).

Groups [A63B 37/0077](#) and [A63B 37/00773](#) should be considered in order to perform a complete search.

N A63B 37/00776 {Slab hardness}

WARNING

Group [A63B 37/00776](#) is incomplete pending reclassification of documents from group [A63B 37/0077](#).

Groups [A63B 37/0077](#) and [A63B 37/00776](#) should be considered in order to perform a complete search.

U A63B 37/0078 {Coefficient of restitution}

D A63B 2037/0079 {Compression}

<administratively transferred to [A63B 37/0087](#) INV>

D A63B 37/0081 {Deflection}

<administratively transferred to [A63B 37/0087](#)>

M A63B 37/0086 {Flexural modulus}; **Bending stiffness**

C A63B 37/0092 {Hardness distribution amongst ~~the~~ different ball layers}

WARNING

Group [A63B 37/0092](#) is impacted by reclassification into groups [A63B 37/00921](#) and [A63B 37/00922](#).

Groups [A63B 37/0092](#), [A63B 37/00921](#), and [A63B 37/00922](#) should be considered in order to perform a complete search.

- N A63B 37/00921 {whereby hardness of the cover is higher than hardness of the intermediate layers}
- WARNING
Group [A63B 37/00921](#) is incomplete pending reclassification of documents from group [A63B 37/0092](#).
Groups [A63B 37/0092](#) and [A63B 37/00921](#) should be considered in order to perform a complete search.
- N A63B 37/00922 {whereby hardness of the cover is lower than hardness of the intermediate layers}
- WARNING
Group [A63B 37/00922](#) is incomplete pending reclassification of documents from group [A63B 37/0092](#).
Groups [A63B 37/0092](#) and [A63B 37/00922](#) should be considered in order to perform a complete search.
- U A63B 37/0097 {Layers interlocking by means of protrusions or inserts, lattices or the like}
- M A63B 37/02 . Special cores {(~~A63B 37/0001, A63B 37/0003~~ **take precedence** *balls with finger holes A63B 37/0001, golf ball cores A63B 37/005*)}
- M A63B 37/12 . Special coverings {, i.e. outer layer material (~~A63B 37/0001, A63B 37/0003~~ **take precedence** *balls with finger holes A63B 37/0001, golf ball covers A63B 37/0023*)}
- U A63B 37/14 . Special surfaces {([A63B 37/0004](#) takes precedence)}
- C A63B 41/00** **Hollow inflatable balls**
- WARNING
Group [A63B 41/00](#) is impacted by reclassification into group [A63B 41/125](#).
Groups [A63B 41/00](#) and [A63B 41/125](#) should be considered in order to perform a complete search.
- U A63B 41/12 . Tools or devices for blowing up or closing balls {(for pricking-balls [A63B 39/04](#))}
- N A63B 41/125 . {Large inflatable balls primarily used as body supports for exercising, e.g. balancing}
- WARNING
Group [A63B 41/125](#) is incomplete pending reclassification of documents from group [A63B 41/00](#).
Groups [A63B 41/00](#) and [A63B 41/125](#) should be considered in order to perform a complete search.

Project: RP0347 (A63B)

- U A63B 51/00** **Stringing tennis, badminton or like rackets; Strings therefor; Maintenance of racket strings**
- WARNING
Group [A63B 51/00](#) is incomplete pending reclassification of documents from group [A63B 49/00](#).
Group [A63B 49/00](#) should be considered in order to perform a complete search.
- D A63B 2051/001 . {using strings with different characteristics, e.g. gut and nylon, on the same frame}
- <administratively transferred to [A63B 51/001](#) INV>
- N A63B 51/001 . {using strings made of different materials on the same frame, e.g. gut and nylon}

- D A63B 2051/002
- ~~{using strings with different cross-sections, e.g. different thickness, on the same frame}~~
 - <administratively transferred to [A63B 51/002](#) INV>
- N A63B 51/002
- *{using strings with different cross-sections on the same frame, e.g. with different thickness}*
- D A63B 2051/004
- ~~{using strings with different tension on the same frame}~~
 - <administratively transferred to [A63B 51/004](#) INV>
- N A63B 51/004
- *{using strings with different tension on the same frame}*
- U A63B 51/02
- Strings; String substitutes; Products applied on strings, e.g. for protection against humidity or wear
- D A63B 2051/023
- ~~{with characteristics, e.g. diameter, elasticity varying along the length of the string}~~
 - <administratively transferred to [A63B 51/023](#) INV>
- N A63B 51/023
- *{Strings having characteristics varying along the length of the string, e.g. diameter or elasticity}*
- D A63B 2051/026
- ~~{with non-circular cross-section}~~
 - <administratively transferred to [A63B 51/026](#) INV>
- N A63B 51/026
- *{Strings having non-circular cross-section}*
- U A63B 51/04
- Sheet-like structures used as substitutes
- D A63B 2051/045
- ~~{wooden blade with perforations}~~
 - <administratively transferred to [A63B 51/045](#) INV>
- N A63B 51/045
- ~~{Wooden blades with perforations}~~
- U A63B 51/14
- Arrangements for stringing, e.g. for controlling the tension of the strings during stringing
- WARNING**
Group [A63B 51/14](#) is impacted by reclassification into group [A63B 51/16](#). Groups [A63B 51/14](#) and [A63B 51/16](#) should be considered in order to perform a complete search.
- D A63B 2051/143
- ~~{Hand-Held string-tensioning devices}~~
 - <administratively transferred to [A63B 51/143](#) INV>
- N A63B 51/143
- *{Hand-held string-tensioning devices}*
- D A63B 2051/146
- ~~{Devices simultaneously raising and lowering alternate longitudinal strings previously mounted in a frame, to facilitate the threading of the crossstrings}~~
 - <administratively transferred to [A63B 51/146](#) INV>
- N A63B 51/146
- *{Devices simultaneously raising and lowering alternate longitudinal strings previously mounted in a frame, to facilitate the threading of the cross strings}*
- U A63B 53/00**

Golf clubs**NOTE**

When classifying in group [A63B 53/00](#) and subgroups, subject matter related to details or accessories of golf clubs, bats, rackets or the like are further classified in group [A63B 60/00](#).

WARNING

Group [A63B 53/00](#) is impacted by reclassification into groups [A63B 60/00](#) and [A63B 60/46](#). Groups [A63B 53/00](#) and [A63B 60/00](#), [A63B 60/46](#) should be considered in order to perform a complete search.

- D A63B 2053/002
- ~~{Clubs made of composite, plastics or rubber materials, with integral head and shaft}~~
 - <administratively transferred to [A63B 53/002](#) INV>
- N A63B 53/002
- *{Clubs made of composite, plastics or rubber materials, with integral head and shaft}*
- D A63B 2053/005
- ~~{Club sets}~~
 - <administratively transferred to [A63B 53/005](#) INV>
- N A63B 53/005
- *{Club sets}*
- U A63B 53/02
- Joint structures between the head and the shaft
- WARNING
Group [A63B 53/02](#) is impacted by reclassification into groups [A63B 60/00](#) and [A63B 60/46](#).
Groups [A63B 53/02](#), [A63B 60/00](#), and [A63B 60/46](#) should be considered in order to perform a complete search.
- D A63B 2053/021
- ~~{the shaft axis being forwardly offset relative to the striking face of the head}~~
 - <administratively transferred to [A63B 53/021](#) INV>
- N A63B 53/021
- *{the shaft axis being forwardly offset relative to the striking face of the head}*
- D A63B 2053/022
- ~~{allowing adjustable positioning of the head with respect to the shaft}~~
 - <administratively transferred to [A63B 53/022](#) INV>
- N A63B 53/022
- *{allowing adjustable positioning of the head with respect to the shaft}*
- D A63B 2053/023
- • ~~{adjustable angular orientation}~~
 - <administratively transferred to [A63B 53/023](#) INV>
- N A63B 53/023
- • *{adjustable angular orientation}*
- D A63B 2053/025
- • • ~~{lie angle only, i.e. relative angular adjustment between the shaft and the club head about an axis parallel to the intended line of play when the club is in its normal address position}~~
 - <administratively transferred to [A63B 53/025](#) INV>
- N A63B 53/025
- • • *{lie angle only, i.e. relative angular adjustment between the shaft and the club head about an axis parallel to the intended line of play when the club is in its normal address position}*
- D A63B 2053/026
- • • ~~{loft angle only, i.e. relative angular adjustment between the shaft and the club head about a horizontal axis perpendicular to the intended line of play when the club is in its normal address position}~~
 - <administratively transferred to [A63B 53/026](#) INV>
- N A63B 53/026
- • • *{loft angle only, i.e. relative angular adjustment between the shaft and the club head about a horizontal axis perpendicular to the intended line of play when the club is in its normal address position}*
- D A63B 2053/027
- • • ~~{about the longitudinal axis of the shaft only}~~
 - <administratively transferred to [A63B 53/027](#) INV>
- N A63B 53/027
- • • *{about the longitudinal axis of the shaft only}*
- D A63B 2053/028
- • • ~~{with a range of alternative attachment points for the shaft}~~
 - <administratively transferred to [A63B 53/028](#) INV>
- N A63B 53/028
- • • *{with a range of alternative attachment points for the shaft}*
- U A63B 53/04
- Heads
- WARNING
Group [A63B 53/04](#) is impacted by reclassification into groups [A63B 60/00](#) and [A63B 60/46](#).

Groups [A63B 53/04](#), [A63B 60/00](#), and [A63B 60/46](#) should be considered in order to perform a complete search.

- D A63B 2053/0408
 - • {with defined dimensions}
 - <administratively transferred to [A63B 53/0408](#) INV>
- N A63B 53/0408
 - • {characterised by specific dimensions, e.g. thickness}
- D A63B 2053/0412
 - • • {Volume}
 - <administratively transferred to [A63B 53/0412](#) INV>
- N A63B 53/0412
 - • • {Volume}
- D A63B 2053/0416
 - • {Heads with an impact surface provided by a face insert}
 - <administratively transferred to [A63B 53/0416](#) INV>
- N A63B 53/0416
 - • {Heads having an impact surface provided by a face insert}
- D A63B 2053/042
 - • • {the face insert consisting of a material different from that of the head}
 - <administratively transferred to [A63B 53/042](#) INV>
- N A63B 53/042
 - • • {the face insert consisting of a material different from that of the head}
- D A63B 2053/0425
 - • • • {the face insert comprising two or more different materials}
 - <administratively transferred to [A63B 53/0425](#) INV>
- N A63B 53/0425
 - • • • {the face insert comprising two or more different materials}
- D A63B 2053/0429
 - • • {the face insert comprising two or more layers of material}
 - <administratively transferred to [A63B 53/0429](#) INV>
- N A63B 53/0429
 - • • {the face insert comprising two or more layers of material}
- D A63B 2053/0433
 - • {with special sole configurations}
 - <administratively transferred to [A63B 53/0433](#) INV>
- N A63B 53/0433
 - • {with special sole configurations}
- N A63B 53/0437
 - • {with special crown configurations}
- D A63B 2053/0437
 - • • {with special crown configurations}
 - <administratively transferred to [A63B 53/0437](#) INV>
- D A63B 2053/0441
 - • {with visual indicators for aligning the golf club}
 - <administratively transferred to [A63B 53/0441](#) INV>
- N A63B 53/0441
 - • {with visual indicators for aligning the golf club}
- D A63B 2053/0445
 - • {Details of grooves or the like on impact surface}
 - <administratively transferred to [A63B 53/0445](#) INV>
- N A63B 53/0445
 - • {Details of grooves or the like on the impact surface}
- D A63B 2053/045
 - • {Strengthening ribs}
 - <administratively transferred to [A63B 53/045](#) INV>
- N A63B 53/045
 - • {Strengthening ribs}
- D A63B 2053/0454
 - • • {Strengthening ribs on the rear surface of the impact face plate}
 - <administratively transferred to [A63B 53/0454](#) INV>
- N A63B 53/0454
 - • • {Strengthening ribs on the rear surface of the impact face plate}
- D A63B 2053/0458
 - • {with non-uniform thickness of the impact face plate}
 - <administratively transferred to [A63B 53/0458](#) INV>
- N A63B 53/0458
 - • {with non-uniform thickness of the impact face plate}
- D A63B 2053/0462
 - • • {characterised by tapering thickness of the impact face plate}
 - <administratively transferred to [A63B 53/0462](#) INV>

- N A63B 53/0462 · · · {characterised by tapering thickness of the impact face plate}
- U A63B 2053/0491 · · {with added weights, e.g. changeable, replaceable}
- WARNING
Group [A63B 2053/0491](#) is impacted by reclassification into group [A63B 60/02](#).
Groups [A63B 2053/0491](#) and [A63B 60/02](#) should be considered in order to perform a complete search.
- M A63B 2053/0495 · · · {moving on impact, slidable, spring or otherwise elastically ~~biased~~*biased*}
- M A63B 59/00 **Bats, rackets, or the like, not covered by groups [A63B 49/00](#) - [A63B 57/00](#) ~~((details [A63B 60/00](#)))~~****
- NOTES
1. In this group, the following term is used with the meaning indicated:
 · "ball" covers also pucks or other objects to be hit during the game.
2. When classifying in group [A63B 59/00](#) and subgroups, subject matter related to details or accessories of golf clubs, bats, rackets or the like are further classified in group [A63B 60/00](#).
- WARNING
Group [A63B 59/00](#) is impacted by reclassification into groups [A63B 60/00](#), [A63B 60/46](#), [A63B 2102/00](#), [A63B 2102/10](#), [A63B 2102/12](#), [A63B 2102/26](#), [A63B 2102/28](#), [A63B 2102/30](#), and [A63B 2102/38](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- U A63B 60/00 **Details or accessories of golf clubs, bats, rackets or the like****
- WARNING
Group [A63B 60/00](#) is incomplete pending reclassification of documents from groups [A63B 49/00](#) - [A63B 49/14](#), [A63B 53/00](#) - [A63B 53/14](#), [A63B 59/00](#), [A63B 59/20](#), [A63B 59/40](#) and [A63B 59/60](#) - [A63B 59/80](#).
Groups [A63B 59/00](#), [A63B 59/20](#), [A63B 59/40](#) and [A63B 59/60](#) - [A63B 59/80](#) should also be considered in order to perform a complete search.
- D A63B 2060/002 · {Resonance frequency related characteristics}
 <administratively transferred to [A63B 60/002](#) INV>
- N A63B 60/002 · {Resonance frequency related characteristics}
- D A63B 2060/004 · {striking surfaces coated with high-friction abrasive material}
 <administratively transferred to [A63B 60/004](#) INV>
- N A63B 60/004 · {Striking surfaces coated with high-friction abrasive materials}
- D A63B 2060/006 · {having special surfaces reducing air resistance}
 <administratively transferred to [A63B 60/006](#) INV>
- N A63B 60/006 · {Surfaces specially adapted for reducing air resistance}
- D A63B 2060/0081 · {Substantially flexible shafts, hinged shafts}
 <administratively transferred to [A63B 60/0081](#) INV>
- N A63B 60/0081 · {Substantially flexible shafts; Hinged shafts}
- D A63B 2060/0085 · {Telescopic shafts}
 <administratively transferred to [A63B 60/0085](#) INV>
- N A63B 60/0085 · {Telescopic shafts}

- M A63B 60/06
- Handles ~~{{structurally associated with frames of stringed rackets A63B 49/08}}~~
- WARNING**
Group [A63B 60/06](#) is impacted by reclassification into groups [A63B 60/08](#) and [A63B 60/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- U A63B 60/48
- with corrugated cross-section

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- T A63B 69/00** **Training appliances or apparatus for special sports (training of parachutists [B64D 23/00](#))**
- U A63B 69/0002
- {for baseball}
- U A63B 69/0013
- • {Baseball bases}
- U A63B 69/002
- {for football (American-football dummies [A63B 69/345](#))}
- U A63B 69/0024
- {for hockey}
- U A63B 69/0026
- • {for ice-hockey}
- U A63B 69/004
- {for the martial arts, e.g. karate, judo ([A63B 69/20](#), [A63B 69/34](#) take precedence)}
- U A63B 2069/0044
- • {Fake or disarmed practise weapons, i.e. for mimicking combat situations}
- U A63B 69/0048
- {for mountaineering, e.g. climbing-walls, grip elements for climbing-walls}
- D A63B 69/0051
- {not used, see subgroups and ~~A63B 69/00~~}
- <administratively transferred to [A63B 69/00](#)>
- C A63B 69/0053
- - {Apparatus generating random stimulus signals for reaction-time training involving a substantial physical effort (~~testing reaction time A61B 5/162; reaction-time games A63F 9/0096~~)}
- WARNING**
Group [A63B 69/0053](#) is impacted by reclassification into group [A63B 69/0055](#).
Groups [A63B 69/0053](#) and [A63B 69/0055](#) should be considered in order to perform a complete search.
- N A63B 69/0055
- • {with means for distracting the user, e.g. visual or audio means}
- WARNING**
Group [A63B 69/0055](#) is incomplete pending reclassification of documents from group [A63B 69/0053](#).
Groups [A63B 69/0053](#) and [A63B 69/0055](#) should be considered in order to perform a complete search.
- D A63B 2069/0055
- • • {with means for distracting the user, e.g. visual or audio means}
- <administratively transferred to [A63B 69/0055](#) INV>
- C A63B 69/0057
- - {Means for physically limiting movements of body parts ([A63B 23/0211](#) takes precedence)}
- WARNING**
Group [A63B 69/0057](#) is impacted by reclassification into group [A63B 69/0062](#).
Groups [A63B 69/0057](#) and [A63B 69/0062](#) should be considered in order to perform a complete search.
- M A63B 69/0059
- • - {worn by the user}

- N A63B 69/0062
- {Leg restraining devices}
- WARNING
Group [A63B 69/0062](#) is incomplete pending reclassification of documents from group [A63B 69/0057](#).
Groups [A63B 69/0057](#) and [A63B 69/0062](#) should be considered in order to perform a complete search.
- D A63B 2069/0062
- • {Leg-restraining devices}
- <administratively transferred to [A63B 69/0062](#) INV>
- M A63B 69/0064
- {Attachments on the trainee preventing falling}
- U A63B 69/0073
- {Means for releasably holding a ball in position; Balls constrained to move around a fixed point, e.g. by tethering}
- U A63B 69/0079
- {Balls tethered to a line or cord ([A63B 43/007](#) takes precedence; other games using tethered balls [A63B 67/10](#); games using a bat or racket with a ball tethered thereto [A63B 67/20](#))}
- U A63B 69/0093
- {for surfing, i.e. without a sail; for skate or snow boarding}
- WARNING
Group [A63B 69/0093](#) is incomplete pending reclassification of documents from groups [B63B 32/00](#), [B63B 32/20](#), [B63B 34/70](#) and [B63B 35/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- U A63B 69/0097
- {Ball rebound walls (with holes or in combination with nets [A63B 63/00](#))}
- M A63B 69/02
- for fencing {, e.g. means for indicating hits (~~fencing foils, sabres or epees F41B-13/02~~)}
- U A63B 69/12
- Arrangements in swimming pools for teaching swimming {or for training}
- U A63B 69/125
- {Devices for generating a current of water in swimming pools}
- M A63B 69/14
- • Teaching frames for swimming {; Swimming boards (~~life-buoys, life-belts B63C-9/08~~)}
- M A63B 69/16
- for cycling {, i.e. arrangements on or for real bicycles (~~home-trainers A63B-23/0476~~)}
- U A63B 69/34
- {Dummies, e.g.} boxing or {American-} football dummies
- C A63B 69/36
- for golf
- WARNING
Group [A63B 69/36](#) is impacted by reclassification into group [A63B 69/3605](#).
Groups [A63B 69/36](#) and [A63B 69/3605](#) should be considered in order to perform a complete search.
- D A63B 2069/3602
- {Player's game information devices}
- <administratively transferred to [A63B 69/36](#) INV>
- N A63B 69/3605
- • {Golf club selection aids informing player of his average or expected shot distance for each club}
- WARNING
Group [A63B 69/3605](#) is incomplete pending reclassification of documents from group [A63B 69/36](#).
Groups [A63B 69/36](#) and [A63B 69/3605](#) should be considered in order to perform a complete search.
- D A63B 2069/3605
- • {Golf club selection aids informing player of his average or expected shot distance for each club}
- <administratively transferred to [A63B 69/3605](#) INV>

- D A63B 69/3611 . . . {not used, ~~see A63B 69/36~~ and subgroups}
<administratively transferred to [A63B 69/36](#)>
- M A63B 69/3614 . . . {using electro-magnetic, magnetic or ultrasonic radiation emitted, reflected or interrupted by the golf club}
- C A63B 69/3617 . . . {Striking surfaces with impact indicating means, e.g. markers}
- WARNING**
Group [A63B 69/3617](#) is impacted by reclassification into group [A63B 69/362](#).
Groups [A63B 69/3617](#) and [A63B 69/362](#) should be considered in order to perform a complete search.
- N A63B 69/362 . . . {electrical or electronic}
WARNING
Group [A63B 69/362](#) is incomplete pending reclassification of documents from group [A63B 69/3617](#).
Groups [A63B 69/3617](#) and [A63B 69/362](#) should be considered in order to perform a complete search.
- D A63B 2069/362 . . . {electrical or electronic}
<administratively transferred to [A63B 69/362](#) INV>
- N A63B 69/3621 . . . {Contacting or non-contacting mechanical means for guiding the swing}
- N A63B 69/36211 . . . {Mechanical guides guiding the club head end during the complete swing, e.g. rails}
- N A63B 69/36212 . . . {with a flexible member fixed on the club and rotating around a fixed supporting point (clubs only for gymnastics or muscular training [A63B 15/00](#))}
- N A63B 69/36213 . . . {with arm or rod fixed on the club and rotating around a fixed supporting point}
- C A63B 69/3623 . . . {for driving ([A63B 69/3608](#), [A63B 69/3658](#), [A63B 69/3661](#), [A63B 69/3667](#) and [A63B 69/3691](#) take precedence)}
- WARNING**
Group [A63B 69/3623](#) is impacted by reclassification into groups [A63B 69/3629](#), [A63B 2214/00](#), and [A63B 2225/11](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- D A63B 2069/3626 . . . {Details}
<administratively transferred to [A63B 69/3623](#) INV>
- N A63B 69/3629 . . . {Visual means not attached to the body for aligning, positioning the trainee's head or for detecting head movement, e.g. by parallax}
WARNING
Group [A63B 69/3629](#) is incomplete pending reclassification of documents from group [A63B 69/3623](#).
Groups [A63B 69/3623](#) and [A63B 69/3629](#) should be considered in order to perform a complete search.
- D A63B 2069/3629 . . . {Visual means not attached to the body for positioning the trainee's head or for detecting head movement, e.g. by parallax}
<administratively transferred to [A63B 69/3629](#) INV>
- U A63B 69/3632 . . . {Clubs or attachments on clubs, e.g. for measuring, aligning ([A63B 69/3614](#) takes precedence; clubs for swinging exercises in general [A63B 15/00](#))}

- D A63B 69/3641 . . . {with guides for guiding the swing}
<administratively transferred to [A63B 69/3621](#)>
- D A63B 69/3644 . . . {Mechanical guide guiding the club head end during the complete swing, e.g. rails}
<administratively transferred to [A63B 69/36211](#)>
- D A63B 69/3647 {with a flexible member fixed on the club and rotating around a fixed supporting point}
<administratively transferred to [A63B 69/36212](#)>
- D A63B 69/365 {with arm or rod fixed on the club and rotating around a fixed supporting point}
<administratively transferred to [A63B 69/36213](#)>
- U A63B 69/3652 . . . {Inclined platforms for practising drives from slopes}
- U A63B 69/3661 . . {Mats for golf practice, e.g. mats having a simulated turf, a practice tee or a green area}
- C A63B 69/3676 . . {for putting ([A63B 69/3608](#), [A63B 69/3661](#), [A63B 69/3667](#) and [A63B 69/3697](#) take precedence)}
- WARNING**
*Group [A63B 69/3676](#) is impacted by reclassification into group [A63B 69/3682](#).
Groups [A63B 69/3676](#) and [A63B 69/3682](#) should be considered in order to perform a complete search.*
- D A63B 2069/3679 . . . {Details}
<administratively transferred to [A63B 69/3676](#) INV>
- N A63B 69/3682 . . . {Visual means not attached to the body for aligning, positioning the trainee's head or for detecting head movement, e.g. by parallax}
- WARNING**
*Group [A63B 69/3682](#) is incomplete pending reclassification of documents from group [A63B 69/3676](#).
Groups [A63B 69/3676](#) and [A63B 69/3682](#) should be considered in order to perform a complete search.*
- D A63B 2069/3682 {Visual means not attached to the body for positioning the trainee's head or for detecting head movement, e.g. by parallax}
<administratively transferred to [A63B 69/3682](#) INV>
- U A63B 69/3685 . . . {Putters or attachments on putters, e.g. for measuring, aligning ([A63B 69/3614](#) takes precedence)}
- U A63B 69/3691 . . {Golf courses; Golf practising terrains having a plurality of driving areas, fairways, greens (special golf games, e.g. miniature golf, [A63B 67/02](#); mats for simulating golf greens [A63B 69/3661](#))}
- U A63B 69/40 . . Stationarily-arranged devices for projecting balls (or other bodies) ({golf cups with ball ejector means [A63B 57/405](#);} traps for clay-pigeon targets [F41J 9/18](#))
- U A63B 69/406 . . {with rotating discs, wheels or pulleys gripping and propelling the balls or bodies by friction}
- U A63B 69/407 . . {with spring-loaded propelling means}
- U A63B 71/00 Games or sports accessories not covered in groups [A63B 1/00](#) - [A63B 69/00](#) (starting appliances [A63K 3/02](#))**

- U A63B 71/0036
- {Accessories for stowing, putting away or transporting exercise apparatus or sports equipment ([A63B 47/00](#), [A63B 55/00](#), [A63B 60/56](#) take precedence)}
- WARNING
Group [A63B 71/0036](#) is impacted by reclassification into group [A63B 60/56](#). Groups [A63B 71/0036](#) and [A63B 60/56](#) should be considered in order to perform a complete search.
- U A63B 71/0045
- {specially adapted for games played with rackets or bats ([A63B 60/56](#) takes precedence)}
- WARNING
Group [A63B 71/0045](#) is impacted by reclassification into group [A63B 60/60](#). Groups [A63B 71/0045](#) and [A63B 60/60](#) should be considered in order to perform a complete search.
- U A63B 71/0054
- {Features for injury prevention on an apparatus, e.g. shock absorbers (mats or the like for absorbing shocks for jumping [A63B 6/00](#))}
- U A63B 2071/0081
- {Stopping the operation of the apparatus}
- C A63B 71/02
- for large-room or outdoor sporting games
- WARNING
Group [A63B 71/02](#) is impacted by reclassification into group [A63B 71/03](#). Groups [A63B 71/02](#) and [A63B 71/03](#) should be considered in order to perform a complete search.
- M A63B 71/021
- {Stays or guy-ropes ~~(for masts [E04H 12/20](#), for tents [E04H 15/34](#))}~~}
- U A63B 71/022
- {Backstops, cages, enclosures or the like, e.g. for spectator protection, for arresting balls}
- U A63B 71/023
- {Supports, e.g. poles}
- M A63B 71/028
- {Floor sockets for removable poles ~~(sockets for poles in general [E04H 12/22](#))}~~}
- N A63B 71/03
- {Athletic drills or obstacles for sport training, other than foot obstacles for skipping}
- WARNING
Group [A63B 71/03](#) is incomplete pending reclassification of documents from group [A63B 71/02](#). Groups [A63B 71/02](#) and [A63B 71/03](#) should be considered in order to perform a complete search.
- U A63B 71/06
- Indicating or scoring devices for games or players {, or for other sports activities}
- U A63B 71/0619
- {Displays, user interfaces and indicating devices, specially adapted for sport equipment, e.g. display mounted on treadmills}
- U A63B 2071/0655
- {Tactile feedback}
- U A63B 2071/0694
- {Visual indication, e.g. Indicia}
- M A63B 71/08
- Body-protectors for players or sportsmen, ~~{, i.e. body-protecting accessories affording protection of body parts against blows or collisions}~~ (protective clothing or garments for sporting purposes [A41D 13/00](#))
- M A63B 71/085
- {Mouth or teeth protectors ([A63B 71/081](#) takes precedence; ~~protective face masks [A41D 13/00](#)~~)}
- M A63B 71/12
- for the body, ~~(e.g. shoulders), or the legs { or the legs {, e.g. for the shoulders~~ ([A63B 71/081](#) takes precedence)}
- M A63B 71/1225
- {for the legs, e.g. thighs, knees, ankles, feet ~~(bandages, e.g. orthosis-like supports or braces [A61F 5/0102](#); for strengthening joints [A61F 13/06](#))}~~}

- U A63B 2071/1258 · · · {for the shin, e.g. shin guards}
- M A63B 71/1291 · · · {for the neck ~~(as a part of a helmet A42B)~~}
- U A63B 71/14 · · for the hands, e.g. baseball, boxing or golfing gloves (archer's finger tabs [F41B 5/1473](#))
- M A63B 71/141 · · · {in the form of gloves ~~(gloves in general A41D 19/00)~~}
- D A63B 2207/00** **Exercising or sporting devices provided with means enabling use in the dark**
<administratively transferred to [A63B 2225/76](#) ADD>
- D A63B 2207/02 · Powered illuminating means
 <administratively transferred to [A63B 2225/74](#) ADD>
- C A63B 2209/00** **Characteristics of used materials**
WARNING
Group [A63B 2209/00](#) is impacted by reclassification into group [A63B 2209/18](#). Groups [A63B 2209/00](#) and [A63B 2209/18](#) should be considered in order to perform a complete search.
- U A63B 2209/14 · with form or shape memory materials
- N A63B 2209/18 · biodegradable
WARNING
Group [A63B 2209/18](#) is incomplete pending reclassification of documents from group [A63B 2209/00](#). Groups [A63B 2209/00](#) and [A63B 2209/18](#) should be considered in order to perform a complete search.
- N A63B 2214/00** **Training methods**
WARNING
Group [A63B 2214/00](#) is incomplete pending reclassification of documents from group [A63B 69/3623](#). Groups [A63B 69/3623](#) and [A63B 2214/00](#) should be considered in order to perform a complete search.
- M A63B 2225/00** **~~Other characteristics of sports~~ *Miscellaneous features of sport apparatus, devices or equipment***
- U A63B 2225/10 · Multi-station exercising machines
- U A63B 2225/105 · · each station having its own resisting device, e.g. for training multiple users simultaneously
- U A63B 2225/107 · · · Resisting devices being of the same kind
- N A63B 2225/11 · specially adapted to be transported on a trailer
WARNING
Group [A63B 2225/11](#) is incomplete pending reclassification of documents from group [A63B 69/3623](#). Groups [A63B 69/3623](#) and [A63B 2225/11](#) should be considered in order to perform a complete search.
- M A63B 2225/68 · ~~Apparatus or equipment provided with article holders, e.g. keys, wallets, books~~ *with article holders*
- U A63B 2225/72 · Means preventing unauthorised use, e.g. by lowering a tennis net
- N A63B 2225/74 · with powered illuminating means, e.g. lights
- N A63B 2225/76 · with means enabling use in the dark, other than powered illuminating means

Project: RP0452 (A63C)

- M A63C SKATES; SKIS; ROLLER SKATES; DESIGN OR LAYOUT OF COURTS, RINKS OR THE LIKE (water skis [B63B 32/00](#), [B63B 34/00](#))**
- WARNINGS
1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:
- | | | |
|---------------------------|------------|---------------------------|
| A63C 5/025 | covered by | A63C 5/00 |
| A63C 5/14 | covered by | A63C 5/12 |
2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.
- M A63C 5/00 - ~~A63C 19/00~~ [A63C 11/00](#)** **Skis or snowboards; Accessories for skiing therefor encompasses groups [A63C 5/00](#) – [A63C 11/265](#) only.**
- C A63C 5/00** **Skis or snowboards (sledges with runners, e.g. ski-bobs, [B62B 13/00](#); runners for sledges [B62B 17/02](#); runners for carrying wheeled vehicles to facilitate travel on snow or ice [B62B 19/00](#))**
- WARNING
Group [A63C 5/00](#) is impacted by reclassification into group [A63C 5/025](#). Groups [A63C 5/00](#) and [A63C 5/025](#) should be considered in order to perform a complete search.
- C A63C 5/02** • collapsible; divided
- WARNING
Group [A63C 5/02](#) is impacted by reclassification into group [A63C 5/025](#). Groups [A63C 5/02](#) and [A63C 5/025](#) should be considered in order to perform a complete search.
- N A63C 5/025** • Short skis
- WARNING
Group [A63C 5/025](#) is incomplete pending reclassification of documents from groups [A63C 5/00](#) and [A63C 5/02](#). Groups [A63C 5/00](#), [A63C 5/02](#) and [A63C 5/025](#) should be considered in order to perform a complete search.
- U A63C 11/00** **Accessories for skiing or snowboarding (fittings on vehicles for carrying skis [B60R 9/12](#))**
- U A63C 11/22** • Ski-sticks
- C A63C 11/222** • {Ski-stick handles or hand-straps}
- WARNING
Group [A63C 11/222](#) is impacted by reclassification into groups [A63C 11/2224](#) and [A63C 11/2228](#). Groups [A63C 11/222](#), [A63C 11/2224](#) and [A63C 11/2228](#) should be considered in order to perform a complete search.
- N A63C 11/2224** • • • {Connection systems for hand-straps}
- WARNING
Group [A63C 11/2224](#) is incomplete pending reclassification of documents from group [A63C 11/222](#). Groups [A63C 11/222](#) and [A63C 11/2224](#) should be considered in order to perform a complete search.

- N A63C 11/2228 . . . {Details of hand-straps}
- WARNING
Group [A63C 11/2228](#) is incomplete pending reclassification of documents from group [A63C 11/222](#).
Groups [A63C 11/222](#) and [A63C 11/2228](#) should be considered in order to perform a complete search.

- D A63C 2203/00 - Skates; Accessories for skating
A63C 2203/00

Project: N/A (B01D)

- U B01D 2201/00 Details relating to filtering apparatus
- U B01D 2201/40 . Special measures for connecting different parts of the filter
- B01D 2201/4092 . . **Treated Threaded** sections, e.g. screw

Project: RP0487-F (B05B)

- M B05B 12/00 Arrangements for controlling delivery; Arrangements for controlling the spray area

WARNING

Group B05B 12/00 is impacted by reclassification into groups B05B 12/16, B05B 12/18, B05B 12/20, B05B 12/22, B05B 12/24, B05B 12/26, B05B 12/28, B05B 12/30, B05B 12/32, B05B 12/34, B05B 12/36.

All groups listed in this Warning should be considered in order to perform a complete search.

- M B05B 12/16 . for controlling the spray area ([B05B 3/00](#) takes precedence)

WARNING

Group B05B 12/16 is incomplete pending reclassification of documents from group B05B 12/00. Group B05B 12/16 is also impacted by reclassification into group B05B 12/32.

Groups B05B 12/00, B05B 12/16, and B05B 12/32 should be considered in order to perform a complete search.

- M B05B 12/18 . . using fluids, e.g. gas streams

WARNING

Group B05B 12/18 is incomplete pending reclassification of documents from group B05B 12/00.

Groups B05B 12/00 and B05B 12/18 should be considered in order to perform a complete search.

- M B05B 12/20 . . Masking elements, i.e. elements defining uncoated areas on an object to be coated

WARNING

Group B05B 12/20 is incomplete pending reclassification of documents from group B05B 12/00.

Groups B05B 12/00 and B05B 12/20 should be considered in order to perform a complete search.

- M B05B 12/22 . . . movable relative to the spray area

WARNING

Group B05B 12/22 is incomplete pending reclassification of documents from group B05B 12/00. Group B05B 12/22 is also impacted by reclassification into group B05B 12/34.

~~Groups B05B 12/00, B05B 12/22, and B05B 12/34 should be considered in order to perform a complete search.~~

- M B05B 12/24
- • made at least partly of flexible material, e.g. sheets of paper or fabric

WARNING

~~Group B05B 12/24 is incomplete pending reclassification of documents from group B05B 12/00.
Groups B05B 12/00 and B05B 12/24 should be considered in order to perform a complete search.~~

- M B05B 12/26
- • for masking cavities

WARNING

~~Group B05B 12/26 is incomplete pending reclassification of documents from group B05B 12/00.
Groups B05B 12/00 and B05B 12/26 should be considered in order to perform a complete search.~~

- M B05B 12/28
- • for defining uncoated areas that are not enclosed within coated areas or vice versa, e.g. for defining U-shaped border lines

WARNING

~~Group B05B 12/28 is incomplete pending reclassification of documents from group B05B 12/00.
Groups B05B 12/00 and B05B 12/28 should be considered in order to perform a complete search.~~

- M B05B 12/30
- • specially adapted for vehicle wheels

WARNING

~~Group B05B 12/30 is incomplete pending reclassification of documents from group B05B 12/00.
Groups B05B 12/00 and B05B 12/30 should be considered in order to perform a complete search.~~

- M B05B 12/32
- • Shielding elements, i.e. elements preventing overspray from reaching areas other than the object to be sprayed (nozzles with integral shielding elements [B05B 1/28](#))

WARNING

~~Group B05B 12/32 is incomplete pending reclassification of documents from groups B05B 12/00 and B05B 12/16.
Groups B05B 12/00, B05B 12/16, and B05B 12/32 should be considered in order to perform a complete search.~~

- M B05B 12/34
- • movable relative to the spray area

WARNING

~~Group(B05B 12/34 is incomplete pending reclassification of documents from groups B05B 12/00 and B05B 12/22.
Groups B05B 12/00, B05B 12/22, and B05B 12/34 should be considered in order to perform a complete search.~~

- M B05B 12/36
- • Side shields, i.e. shields extending in a direction substantially parallel to the spray jet

WARNING

~~Group B05B 12/36 is incomplete pending reclassification of documents from group B05B 12/00.
Groups B05B 12/00 and B05B 12/36 should be considered in order to perform a complete search.~~

M	B05B 15/00	<p>Details of spraying plant or spraying apparatus not otherwise provided for; Accessories</p> <p><u>WARNING</u> Group B05B 15/00 is impacted by reclassification into groups B05B 15/14 and B05B 15/18. Groups B05B 15/00, B05B 15/14, and B05B 15/18 should be considered in order to perform a complete search.</p>
M	B05B 15/14	<ul style="list-style-type: none"> • Arrangements for preventing or controlling structural damage to spraying apparatus or its outlets, e.g. for breaking at desired places; Arrangements for handling or replacing damaged parts <p><u>WARNING</u> Group B05B 15/14 is incomplete pending reclassification of documents from group B05B 15/00. Groups B05B 15/00 and B05B 15/14 should be considered in order to perform a complete search.</p>
M	B05B 15/18	<ul style="list-style-type: none"> • for improving resistance to wear, e.g. inserts or coatings; for indicating wear; for handling or replacing worn parts <p><u>WARNING</u> Group B05B 15/18 is incomplete pending reclassification of documents from group B05B 15/00. Groups B05B 15/00 and B05B 15/18 should be considered in order to perform a complete search.</p>
M	B05B 15/50	<ul style="list-style-type: none"> • Arrangements for cleaning; Arrangements for preventing deposits, drying-out or blockage; Arrangements for detecting improper discharge caused by the presence of foreign matter <p><u>WARNING</u> Group B05B 15/50 is impacted by reclassification into group B05B 15/58. Groups B05B 15/50 and B05B 15/58 should be considered in order to perform a complete search.</p>
M	B05B 15/58	<ul style="list-style-type: none"> • preventing deposits, drying-out or blockage by recirculating the fluid to be sprayed from upstream of the discharge opening back to the supplying means {(B05B 1/3093 takes precedence)} <p><u>WARNING</u> Group B05B 15/58 is incomplete pending reclassification of documents from group B05B 15/50. Groups B05B 15/50 and B05B 15/58 should be considered in order to perform a complete search.</p>
M	B05B 15/60	<ul style="list-style-type: none"> • Arrangements for mounting, supporting or holding spraying apparatus <p><u>WARNING</u> Group B05B 15/60 is impacted by reclassification into group B05B 15/63. Groups B05B 15/60 and B05B 15/63 should be considered in order to perform a complete search.</p>
M	B05B 15/63	<ul style="list-style-type: none"> • Handgrips <p><u>WARNING</u> Group B05B 15/63 is incomplete pending reclassification of documents from group B05B 15/60. Groups B05B 15/60 and B05B 15/63 should be considered in order to perform a complete search.</p>

- M B05B 15/70
- Arrangements for moving spray heads automatically to or from the working position
- WARNING**
Group B05B 15/70 is impacted by reclassification into groups B05B 15/72 and B05B 15/74.
Groups B05B 15/70, B05B 15/72, and B05B 15/74 should be considered in order to perform a complete search.
- M B05B 15/72
- using hydraulic or pneumatic means
- WARNING**
Group B05B 15/72 is incomplete pending reclassification of documents from group B05B 15/70.
Groups B05B 15/70 and B05B 15/72 should be considered in order to perform a complete search.
- M B05B 15/74
- driven by the discharged fluid
- WARNING**
Group B05B 15/74 is incomplete pending reclassification of documents from group B05B 15/70.
Groups B05B 15/70 and B05B 15/74 should be considered in order to perform a complete search.

Project: RP0593 (B21J)

- U B21J 5/00
- Methods for forging, hammering, or pressing (for working sheet-metal or metal tubes, rods, or profiles [B21D](#); for working wire [B21F](#)); Special equipment or accessories therefor**
- U B21J 5/06
- for performing particular operations
- U B21J 5/063
- {Friction heat forging (friction heat riveting [B21J 15/027](#))}
- U B21J 5/066
- {Flow drilling}
- N B21J 5/068
- {Shaving, skiving or scarifying for forming lifted portions, e.g. slices or barbs, on the surface of the material}
- WARNING**
Group [B21J 5/068](#) is incomplete pending reclassification of documents from group [B21J 5/12](#).
Groups [B21J 5/12](#) and [B21J 5/068](#) should be considered in order to perform a complete search.
- C B21J 5/12
- Forming profiles on internal or external surfaces (making screw-thread by forging, pressing, or hammering [B21K](#))
- WARNING**
Group [B21J 5/12](#) is impacted by reclassification into group [B21J 5/068](#).
Groups [B21J 5/12](#) and [B21J 5/068](#) should be considered in order to perform a complete search.

Project: RP0429-F (B29C)

- U B29C 39/00
- Shaping by casting, i.e. introducing the moulding material into a mould or between confining surfaces without significant moulding pressure; Apparatus therefor ([B29C 41/00](#) takes precedence)**
- U B29C 39/02
- for making articles of definite length, i.e. discrete articles

- M B29C 39/021
- • {by casting in several steps}
- WARNING**
Group B29C 39/021 is incomplete pending reclassification of documents from group B29D 2009/00.
Groups B29D 2009/00 and B29C 39/021 should be considered in order to perform a complete search.
- M B29C 39/023
- • • {for making multicoloured articles}
- WARNING**
Group B29C 39/023 is incomplete pending reclassification of documents from group B29D 2009/00.
Groups B29D 2009/00 and B29C 39/023 should be considered in order to perform a complete search.
- M B29C 39/025
- • • {for making multilayered articles}
- WARNING**
Group B29C 39/025 is incomplete pending reclassification of documents from group B29D 2009/00.
Groups B29D 2009/00 and B29C 39/025 should be considered in order to perform a complete search.
- M B29C 39/12
- • Making multilayered or multicoloured articles {(B29C 39/021 takes precedence)}
- WARNING**
Group B29C 39/12 is incomplete pending reclassification of documents from group B29D 2009/00.
Groups B29D 2009/00 and B29C 39/12 should be considered in order to perform a complete search.
- M B29C 39/123
- • • {Making multilayered articles}
- WARNING**
Group B29C 39/123 is incomplete pending reclassification of documents from group B29D 2009/00.
Groups B29D 2009/00 and B29C 39/123 should be considered in order to perform a complete search.
- M B29C 39/126
- • • • {by casting between two preformed layers, e.g. deformable layers (between two glass layers B32B 17/10917)}
- WARNING**
Group B29C 39/126 is incomplete pending reclassification of documents from group B29D 2009/00.
Groups B29D 2009/00 and B29C 39/126 should be considered in order to perform a complete search.

Project: RP0392 (B29C)

- U B29C 2945/00 **Indexing scheme relating to injection moulding, i.e. forcing the required volume of moulding material through a nozzle into a closed mould**
- U B29C 2945/76
- Measuring, controlling or regulating
- U B29C 2945/76003
- • Measured parameter
- D B29C 2945/76173
- • • Others
- <administratively transferred to [B29C 2945/76003](#) ADD>
- U B29C 2945/76177
- • Location of measurement

- U B29C 2945/7618 . . . Injection unit
D B29C 2945/7622 others
<administratively transferred to [B29C 2945/7618](#) ADD>
- U B29C 2945/76224 . . . Closure or clamping unit
D B29C 2945/76237 others
<administratively transferred to [B29C 2945/76224](#) ADD>
- U B29C 2945/7624 . . . Ejection unit
D B29C 2945/7625 others
<administratively transferred to [B29C 2945/7624](#) ADD>
- U B29C 2945/76254 . . . Mould
D B29C 2945/76284 others
<administratively transferred to [B29C 2945/76254](#) ADD>
- U B29C 2945/76314 . . . Auxiliary devices
D B29C 2945/76337 other auxiliary devices
<administratively transferred to [B29C 2945/76314](#) ADD>
- D B29C 2945/76341 . . . Others
<administratively transferred to [B29C 2945/76177](#) ADD>
- U B29C 2945/76344 . . Phase or stage of measurement
U B29C 2945/76351 . . . Feeding
D B29C 2945/76364 others
<administratively transferred to [B29C 2945/76351](#) ADD>
- U B29C 2945/76397 . . . Switch-over
D B29C 2945/76411 others
<administratively transferred to [B29C 2945/76397](#) ADD>
- D B29C 2945/76448 . . . Others
<administratively transferred to [B29C 2945/76344](#) ADD>
- U B29C 2945/76451 . . Measurement means
D B29C 2945/76491 . . . Others
<administratively transferred to [B29C 2945/76451](#) ADD>
- U B29C 2945/76494 . . Controlled parameter
D B29C 2945/76652 . . . Others
<administratively transferred to [B29C 2945/76494](#) ADD>
- U B29C 2945/76655 . . Location of control
U B29C 2945/76658 . . . Injection unit
D B29C 2945/76698 others
<administratively transferred to [B29C 2945/76658](#) ADD>
- U B29C 2945/76702 . . . Closure or clamping device
D B29C 2945/76715 others
<administratively transferred to [B29C 2945/76702](#) ADD>
- U B29C 2945/76719 . . . Ejection unit
D B29C 2945/76729 others
<administratively transferred to [B29C 2945/76719](#) ADD>
- U B29C 2945/76732 . . . Mould

- D B29C 2945/76762 others
<administratively transferred to [B29C 2945/76732](#) ADD>
- U B29C 2945/76792 . . . Auxiliary devices
- D B29C 2945/76816 others auxiliary devices
<administratively transferred to [B29C 2945/76792](#) ADD>
- D B29C 2945/76819 . . . Others
<administratively transferred to [B29C 2945/76655](#) ADD>
- U B29C 2945/76822 . . Phase or stage of control
- U B29C 2945/76829 . . . Feeding
- D B29C 2945/76842 others
<administratively transferred to [B29C 2945/76829](#) ADD>
- U B29C 2945/76876 . . . Switch-over
- D B29C 2945/76889 others
<administratively transferred to [B29C 2945/76876](#) ADD>
- D B29C 2945/76926 . . . Others
<administratively transferred to [B29C 2945/76822](#) ADD>
- U B29C 2945/76929 . . Controlling method
- M B29C 2945/76933 . . . ~~Open loop, i.e. the~~ *The* operating conditions are corrected immediately, during the same phase or cycle
- M B29C 2945/76936 . . . ~~Closed loop, i.e. the~~ *The* operating conditions are corrected in the next phase or cycle
- D B29C 2945/76996 . . . Others
<administratively transferred to [B29C 2945/76929](#) ADD>

Project: RP0429-F (B29D)

- D B29D 2009/00 **IPC7 Producing layered products**
~~(Frozen)~~
WARNING
Group B29D 2009/00 is no longer used for classification of documents as January 1, 2019.
The content of this group is being reclassified into groups B29C 39/021, B29C 39/023, B29C 39/025, B29C 39/12, B29C 39/123, B29C 39/126, B32B 3/00 and B32B 33/00.
All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP0429-F (B32B)

- M B32B 3/00 **Layered products comprising a layer with external or internal discontinuities or unevennesses, or a layer of non-planar form (fibrous or filamentary layer [B32B 5/02](#); particulate layer [B32B 5/16](#); foamed layer [B32B 5/18](#)); Layered products having particular features of form (receptacles or tubular products [B32B 1/00](#))**
WARNING
Group B32B 3/00 is incomplete pending reclassification of documents from group B29D 2009/00.
Groups B29D 2009/00 and B32B 3/00 should be considered in order to perform a complete search.

M B32B 33/00 Layered products characterised by particular properties or particular surface features, e.g. particular surface coatings; Layered products designed for particular purposes not covered by another single class

WARNING

Group B32B 33/00 is incomplete pending reclassification of documents from group B29D 2009/00.

Groups B29D 2009/00 and B32B 33/00 should be considered in order to perform a complete search.

Project: RP0376 (B32B)

- U B32B 37/00** Methods or apparatus for laminating, e.g. by curing or by ultrasonic bonding
- U B32B 37/12 · characterised by using adhesives
 - M B32B 37/1207 · · {Heat-activated adhesive (**laminating by the partial melting of layers to form the bond B32B 37/04** takes precedence)}
 - D B32B 2037/1246 · · {Other adhesives}
 - <administratively transferred to [B32B 37/12](#) ADD>
 - M B32B 2037/1253 · · · {curable **adhesive**}
 - M B32B 2037/1261 · · · · {moisture curable}
 - M B32B 2037/1269 · · · · {multi-component adhesive}
 - M B32B 2037/1276 · · · · {water-based adhesive}
 - U B32B 37/14 · characterised by the properties of the layers
 - U B32B 37/15 · · with at least one layer being manufactured and immediately laminated before reaching its stable state, e.g. in which a layer is extruded and laminated while in semi-molten state
 - M B32B 37/153 · · · {at least one layer is extruded and **immediatlyimmediately** laminated while in semi-molten state}

Project: RP0383 (B32B)

- M B32B 2264/00** Composition **or properties** of particles which form a particulate layer or are present as additives
- U B32B 2264/02 · Synthetic macromolecular particles
 - U B32B 2264/0214 · · Particles made of materials belonging to [B32B 27/00](#)
 - M B32B 2264/0228 · · · Vinyl resin particles, e.g. **polyvinyl acetate, polyvinyl alcohol polymers or ethylene-vinyl acetate copolymers**
 - M B32B 2264/0242 · · · · Vinyl halide, e.g. PVC, PVDC, PVF, **PVDF or PVDF (co)polymers**
 - M B32B 2264/025 · · · Acrylic resin particles, e.g. **polymethyl methacrylate or ethylene-acrylate copolymers**
 - M B32B 2264/0257 · · · Polyolefin particles, e.g. **polyethylene or polypropylene homopolymers or ethylene-propylene copolymers (vinyl or acrylic copolymers B32B 2264/0228, B32B 2264/025)**
 - M B32B 2264/10 · Inorganic particles (**layered products comprising a layer of natural mineral particles B32B 19/00**)
 - M B32B 2264/101 · · Glass **particles**
 - M B32B 2264/102 · · Oxide or hydroxide **particles, e.g. silica particles, TiO₂ particles**
 - N B32B 2264/1021 · · · *Silica*
 - N B32B 2264/1022 · · · *Titania*
 - N B32B 2264/1023 · · · *Alumina*

- N B32B 2264/1024 . . . Zirconia
- N B32B 2264/1025 . . . Zinc oxide
- N B32B 2264/1026 . . . Mica
- N B32B 2264/1027 . . . Clay
- M B32B 2264/104 . . Oxysalt **particles**, e.g. carbonate, sulfate, phosphate or nitrate particles
- M B32B 2264/105 . . Metal **particles**
- N B32B 2264/1051 . . . Silver or gold
- N B32B 2264/1052 . . . Aluminum
- N B32B 2264/1053 . . . Alkali metal
- N B32B 2264/1054 . . . Alkaline earth metal
- N B32B 2264/1055 . . . Copper or nickel
- N B32B 2264/1056 . . . Iron or steel
- N B32B 2264/1057 . . . Chromium
- N B32B 2264/1058 . . . Titanium
- N B32B 2264/1059 . . . Zinc
- M B32B 2264/107 . . Ceramic **particles**
- M B32B 2264/108 . . . Carbon **particles**, e.g. graphite particles
- U B32B 2264/12 . Mixture of at least two particles made of different materials
- N B32B 2264/20 . Particles characterised by shape
- N B32B 2264/201 . . Flat or platelet-shaped particles, e.g. flakes
- N B32B 2264/202 . . Solid spheres
- N B32B 2264/203 . . Expanded, porous or hollow particles
- N B32B 2264/2031 . . . Porous particles
- N B32B 2264/2032 . . . Hollow spheres
- N B32B 2264/204 . . Rod- or needle-shaped particles
- N B32B 2264/30 . Particles characterised by physical dimension
- N B32B 2264/301 . . Average diameter smaller than 100 nm
- N B32B 2264/302 . . Average diameter in the range from 100 nm to 1000 nm
- N B32B 2264/303 . . Average diameter greater than 1µm
- N B32B 2264/304 . . Particle length
- N B32B 2264/305 . . Particle size distribution, e.g. unimodal size distribution
- N B32B 2264/306 . . . Multimodal particle size distribution
- N B32B 2264/3065 bimodal size distribution
- N B32B 2264/307 . . Surface area of particles
- N B32B 2264/308 . . Aspect ratio of particles
- N B32B 2264/40 . Pretreated particles
- N B32B 2264/401 . . with inorganic substances
- N B32B 2264/402 . . with organic substances
- N B32B 2264/4021 . . . with silicon-containing compounds
- N B32B 2264/403 . . coated or encapsulated
- N B32B 2264/50 . Particles characterised by their position or distribution in a layer
- N B32B 2264/501 . . homogeneously distributed
- N B32B 2264/502 . . distributed in a gradient manner
- N B32B 2264/503 . . distributed in a predetermined pattern in a thickness direction

- N B32B 2264/504 . . distributed in a predetermined pattern in a direction perpendicular to the thickness

Project: RP0447 (B41J)

- U B41J 3/00 **Typewriters or selective printing or marking mechanisms, {e.g. ink-jet printers, thermal printers} characterised by the purpose for which they are constructed (cryptographic typewriters [G09C 3/00](#))**
- U B41J 3/407 . . for marking on special material (printing on special surfaces [B41F 7/00](#); {apparatus or processes for manufacturing printed circuits by printing or dispensing a conductive paste or ink [H05K 3/1241](#)})
- C B41J 3/4073 . . {Printing on three-dimensional objects not being in sheet or web form, e.g. spherical or cubic objects ([B41J 3/283](#), [B41J 3/286](#) take precedence; building up a 3D object using individual droplets from jetting heads [B29C 64/112](#))}
- WARNING**
Group [B41J 3/4073](#) is impacted by reclassification into groups [B41J 3/40731](#) and [B41J 3/40733](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B41J 3/40731 . . . {Holders for objects, e. g. holders specially adapted to the shape of the object to be printed or adapted to hold several objects}
- WARNING**
Group [B41J 3/40731](#) is incomplete pending reclassification of documents from group [B41J 3/4073](#).
Groups [B41J 3/40731](#) and [B41J 3/4073](#) should be considered in order to perform a complete search.
- N B41J 3/40733 . . . {Printing on cylindrical or rotationally symmetrical objects, e. g. on bottles}
- WARNING**
Group [B41J 3/40733](#) is incomplete pending reclassification of documents from group [B41J 3/4073](#).
Groups [B41J 3/40733](#) and [B41J 3/4073](#) should be considered in order to perform a complete search.
- U B41J 2202/00 **Embodiments of or processes related to ink-jet or thermal heads**
- U B41J 2202/50 . . Embodiments of processes related to optical heads
- N B41J 2203/00 **Embodiments of or processes related to the control of the printing process**
- N B41J 2203/01 . . Inspecting a printed medium or a medium to be printed using a sensing device
- N B41J 2203/011 . . Inspecting the shape or condition, e.g. wrinkled or warped, of a medium to be printed before printing on it

Project: N/A (B65F)

- U B65F 1/00 **Refuse receptacles; {Accessories therefor}(containers not specially adapted for refuse, features of refuse receptacles of general interest [B65D](#))**
- U B65F 1/0033 . . {specially adapted for segregated refuse collecting, e.g. receptacles with several compartments; Combination of receptacles ([B65F 1/0093](#) takes precedence)}
- U B65F 1/0053 . . {Combination of several receptacles}
- B65F 1/0073 . . . {Flexible receptacles fixed on a frame or in an enclosure (sack holders ~~per se~~ [B65B 7/12](#)[B65B 67/12](#))}

Project: RP0267 (B65H)**C B65H 15/00****Overturning articles****WARNING**

Group [B65H 15/00](#) is impacted by reclassification into groups [B65H 15/004](#), [B65H 15/008](#), [B65H 15/012](#) and [B65H 15/016](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B65H 15/004

- {employing rollers}

WARNING

Group [B65H 15/004](#) is incomplete pending reclassification of documents from groups [B65H 15/00](#) and [B65H 15/02](#).

Groups [B65H 15/00](#), [B65H 15/02](#) and [B65H 15/004](#) should be considered in order to perform a complete search.

N B65H 15/008

- {employing belts}

WARNING

Group [B65H 15/008](#) is incomplete pending reclassification of documents from groups [B65H 15/00](#) and [B65H 15/02](#).

Groups [B65H 15/00](#), [B65H 15/02](#) and [B65H 15/008](#) should be considered in order to perform a complete search.

N B65H 15/012

- {twisted belts}

WARNING

Group [B65H 15/012](#) is incomplete pending reclassification of documents from groups [B65H 15/00](#) and [B65H 15/02](#).

Groups [B65H 15/00](#), [B65H 15/02](#) and [B65H 15/012](#) should be considered in order to perform a complete search.

N B65H 15/016

- {employing rotary or reciprocating elements supporting transport means}

WARNING

Group [B65H 15/016](#) is incomplete pending reclassification of documents from groups [B65H 15/00](#) and [B65H 15/02](#).

Groups [B65H 15/00](#), [B65H 15/02](#) and [B65H 15/016](#) should be considered in order to perform a complete search.

C B65H 15/02

- Overturning piles

WARNING

Group [B65H 15/02](#) is impacted by reclassification into groups [B65H 15/004](#), [B65H 15/008](#), [B65H 15/012](#) and [B65H 15/016](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP0125 (B65H)**M B65H 16/00****Unwinding, paying-out webs {(reel-to-reel type web winding and unwinding mechanisms [B65H 18/103](#), [B65H 18/145](#))}****WARNING**

Groups [B65H 16/00](#), [B65H 16/005](#), [B65H 16/02](#), [B65H 16/028](#), [B65H 16/04](#), [B65H 16/06](#), [B65H 16/08](#), [B65H 16/10](#), [B65H 16/103](#), and [B65H 16/106](#) are incomplete pending reclassification of documents from groups [B65H 16/025](#) and [B65H 16/026](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- T B65H 16/02 · Supporting web roll
- C B65H 16/021 · · {Multiple web roll supports}
- WARNING
Group [B65H 16/021](#) is incomplete pending reclassification of documents from groups [B65H 16/025](#) and [B65H 16/026](#).
Group [B65H 16/021](#) is also impacted by reclassification into group [B65H 16/024](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C B65H 16/023 · · · {rotatable}
- WARNING
Group [B65H 16/023](#) is impacted by reclassification into group [B65H 16/024](#).
Groups [B65H 16/023](#) and [B65H 16/024](#) should be considered in order to perform a complete search.
- N B65H 16/024 · · · · {Turrets}
- WARNING
Group [B65H 16/024](#) is incomplete pending reclassification of documents from groups [B65H 16/021](#) and [B65H 16/023](#).
Groups [B65H 16/021](#), [B65H 16/023](#), and [B65H 16/024](#) should be considered in order to perform a complete search.
- F B65H 16/025
(Frozen) · · {Unwinding apparatus incorporating length-measuring devices}
- WARNING
Group [B65H 16/025](#) is no longer used for the classification of documents as of August 1, 2020.
The content of this group is being reclassified into groups [B65H 16/00](#), [B65H 16/005](#), [B65H 16/02](#), [B65H 16/021](#), [B65H 16/028](#), [B65H 16/04](#), [B65H 16/06](#), [B65H 16/08](#), [B65H 16/10](#), [B65H 16/103](#), [B65H 16/106](#), [B65H 2511/11](#), and [B65H 2220/03](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- F B65H 16/026
(Frozen) · · {Unwinding apparatus incorporating inspecting devices}
- WARNING
Group [B65H 16/026](#) is no longer used for the classification of documents as of August 1, 2020.
The content of this group is being reclassified into groups [B65H 16/00](#), [B65H 16/005](#), [B65H 16/02](#), [B65H 16/021](#), [B65H 16/028](#), [B65H 16/04](#), [B65H 16/06](#), [B65H 16/08](#), [B65H 16/10](#), [B65H 16/103](#), and [B65H 16/106](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- U B65H 18/00 Winding webs**
- U B65H 18/02 · Supporting web roll
- C B65H 18/021 · · {Multiple web roll supports}
- WARNING
Group [B65H 18/021](#) is impacted by reclassification into group [B65H 18/0212](#).
Groups [B65H 18/021](#) and [B65H 18/0212](#) should be considered in order to perform a complete search.

- N B65H 18/0212 · · · {Turrets}
- WARNING
 Group [B65H 18/0212](#) is incomplete pending reclassification of documents from group [B65H 18/021](#).
 Groups [B65H 18/021](#) and [B65H 18/0212](#) should be considered in order to perform a complete search.

U B65H 2220/00 Function indicators

- T B65H 2220/03 · indicating an entity which is measured, estimated, evaluated, calculated or determined but which does not constitute an entity which is adjusted or changed by the control process per se

WARNING

Group [B65H 2220/03](#) is incomplete pending reclassification of documents from group [B65H 16/025](#).
 Groups [B65H 16/025](#) and [B65H 2220/03](#) should be considered in order to perform a complete search.

U B65H 2511/00 Dimension; Position; Number; Identification; Occurrence

- U B65H 2511/10 · Size; Dimension
- T B65H 2511/11 · · Length

WARNING

Group [B65H 2511/11](#) is incomplete pending reclassification of documents from group [B65H 16/025](#).
 Groups [B65H 16/025](#) and [B65H 2511/11](#) should be considered in order to perform a complete search.

Project: RP0309-F (C08G)

U C08G 75/00 Macromolecular compounds obtained by reactions forming a linkage containing sulfur with or without nitrogen, oxygen, or carbon in the main chain of the macromolecule

- U C08G 75/02 · Polythioethers
- M C08G 75/0204 · · Polyarylenethioethers

NOTES

1. In this group, macromolecular compounds are classified for the inventive aspects which are relevant in any of the following sets of groups:

- [C08G 75/0209-C08G 75/0245](#);
- [C08G 75/025-C08G 75/0268](#);
- [C08G 75/0277-C08G 75/0281](#);
- [C08G 75/0286-C08G 75/0295](#).

2. Within each set of groups mentioned in Note (1), the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place.

WARNING

Groups [C08G 75/0204-C08G 75/0281](#) are incomplete pending reclassification of documents from groups [C08G 75/04](#) and [C08G 75/045](#).
 All groups listed in this Warning should be considered in order to perform a complete search.

- M C08G 75/0245
- • • Block or graft polymers
- WARNING**
Group C08G 75/0245 is incomplete pending reclassification of documents from group C08G 75/12.
Groups C08G 75/12 and C08G 75/0245 should be considered in order to perform a complete search.
- M C08G 75/0277
- • • Post-polymerisation treatment (chemical after-treatment [C08G 75/0286](#))
- WARNING**
Groups C08G 75/0277 and C08G 75/0281 are incomplete pending reclassification of documents from groups C08G 75/04 and C08G 75/045.
Groups C08G 75/0277 and C08G 75/0281 are also impacted by reclassification into groups C08G 75/0286-C08G 75/0295.
All groups listed in this Warning should be considered in order to perform a complete search.
- M C08G 75/0286
- • • Chemical after-treatment
- WARNING**
Groups C08G 75/0286-C08G 75/0295 are incomplete pending reclassification of documents from groups C08G 75/0277, C08G 75/0281, C08G 75/04, and C08G 75/045.
All groups listed in this Warning should be considered in order to perform a complete search.
- M C08G 75/04
- • from mercapto compounds or metallic derivatives thereof ([C08G 75/0204](#) takes precedence)
- WARNING**
Groups C08G 75/04 and C08G 75/045 are impacted by reclassification into groups C08G 75/0204-C08G 75/0295.
All groups listed in this Warning should be considered in order to perform a complete search.
- M C08G 75/12
- Polythioether-ethers ([C08G 75/0245](#) takes precedence)
- WARNING**
Group C08G 75/12 is impacted by reclassification into group C08G 75/0245.
Groups C08G 75/12 and C08G 75/0245 should be considered in order to perform a complete search.

Project: N/A (C08G)

- U C08G 2101/00**
- C08G 2101/0041
- C08G 2101/005
- C08G 2101/0058
- C08G 2101/0066
- Foams**
- {~~having~~Having specified density}
 - • {< ~~50 kg~~50kg/m³}
 - • {> 50 and < 150 kg ~~≥ 50 and < 150~~kg/m³}
 - • {> 150 Kg/m including microcellular foams ~~≥ 150~~kg/m³}

Project: N/A (C08J)

- U C08J 5/00**
- Manufacture of articles or shaped materials containing macromolecular substances (shaping of foodstuffs [A23P](#); manufacture of semi-permeable membranes [B01D 67/00](#) - [B01D 71/00](#); mechanical features, see the relevant classes, e.g. [B29](#))**

- C08J 5/20
- Manufacture of shaped *structures* of ion-exchange resins {~~Use of macromolecular compounds as anion B01J 41/14 or cation B01J 39/20 exchangers~~}(use of macromolecular compounds as cation exchangers B01J 39/20; use of macromolecular compounds as anion exchangers B01J 41/14)}

Project: RP0633-C (C08J)

- U C08J 7/00** Chemical treatment or coating of shaped articles made of macromolecular substances (coating with metallic material [C23C](#); electrolytic deposition of metals [C25](#))
- U C08J 7/04
- Coating
- WARNING
Group [C08J 7/04](#) is impacted by reclassification into groups [C08J 7/043](#), [C08J 7/044](#), [C08J 7/046](#), [C08J 7/048](#), [C08J 7/05](#), [C08J 7/052](#), [C08J 7/054](#), and [C08J 7/056](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C C08J 7/042
- {with two or more layers, where at least one layer of a composition contains a polymer binder}
- WARNING
*Group [C08J 7/042](#) is impacted by reclassification into groups [C08J 7/043](#) - [C08J 7/056](#).
All groups listed in this Warning should be considered in order to perform a complete search.*
- C C08J 7/0423
- • {with at least one layer of inorganic material and at least one layer of a composition containing a polymer binder}
- WARNING
*Group [C08J 7/0423](#) is impacted by reclassification into groups [C08J 7/043](#) - [C08J 7/056](#).
All groups listed in this Warning should be considered in order to perform a complete search.*
- C C08J 7/0427
- {with only one layer of a composition containing a polymer binder (with more layers [C08J 7/042](#))}
- WARNING
*Group [C08J 7/0427](#) is impacted by reclassification into groups [C08J 7/043](#) - [C08J 7/056](#).
All groups listed in this Warning should be considered in order to perform a complete search.*
- M C08J 7/043
- • Improving the adhesiveness of the coatings per se, e.g. forming primers (adhesives in the form of films or foils characterised by the primer layers between the polymer carriers and the adhesives [C09J 7/50](#))
- WARNING
Group [C08J 7/043](#) is incomplete pending reclassification of documents from ~~group~~groups [C08J 7/04](#), [C08J 7/042](#), [C08J 7/0423](#), [C08J 7/0427](#), [C08J 7/06](#), and [C08J 7/065](#).
~~Groups~~All [C08J 7/04](#) and groups listed [C08J 7/043](#) in this Warning should be considered in order to perform a complete search.

- M C08J 7/044
- Forming conductive coatings; Forming coatings having anti-static properties
- WARNING
Group [C08J 7/044](#) is incomplete pending reclassification of documents from [groupgroups C08J 7/04, C08J 7/042, C08J 7/0423, C08J 7/0427, C08J 7/06, and C08J 7/065](#).
[GroupsAll C08J 7/04 and groups listed C08J 7/044 in this Warning](#) should be considered in order to perform a complete search.
- M C08J 7/046
- Forming abrasion-resistant coatings; Forming surface-hardening coatings
- WARNING
Group [C08J 7/046](#) is incomplete pending reclassification of documents from [groupgroups C08J 7/04, C08J 7/042, C08J 7/0423, C08J 7/0427, C08J 7/06, and C08J 7/065](#).
[GroupsAll C08J 7/04 and groups listed C08J 7/046 in this Warning](#) should be considered in order to perform a complete search.
- M C08J 7/048
- Forming gas barrier coatings
- WARNING
Group [C08J 7/048](#) is incomplete pending reclassification of documents from [groupgroups C08J 7/04, C08J 7/042, C08J 7/0423, C08J 7/0427, C08J 7/06, and C08J 7/065](#).
[GroupsAll C08J 7/04 and groups listed C08J 7/048 in this Warning](#) should be considered in order to perform a complete search.
- M C08J 7/05
- Forming flame retardant coatings or fire resistant coatings
- WARNING
Group [C08J 7/05](#) is incomplete pending reclassification of documents from [groupgroups C08J 7/04, C08J 7/042, C08J 7/0423, C08J 7/0427, C08J 7/06, and C08J 7/065](#).
[GroupsAll C08J 7/04 and groups listed C08J 7/05 in this Warning](#) should be considered in order to perform a complete search.
- M C08J 7/052
- Forming heat-sealable coatings
- WARNING
Group [C08J 7/052](#) is incomplete pending reclassification of documents from [groupgroups C08J 7/04, C08J 7/042, C08J 7/0423, C08J 7/0427, C08J 7/06, and C08J 7/065](#).
[GroupsAll C08J 7/04 and groups listed C08J 7/052 in this Warning](#) should be considered in order to perform a complete search.
- M C08J 7/054
- Forming anti-misting or drip-proofing coatings
- WARNING
Group [C08J 7/054](#) is incomplete pending reclassification of documents from [groupgroups C08J 7/04, C08J 7/042, C08J 7/0423, C08J 7/0427, C08J 7/06, and C08J 7/065](#).
[GroupsAll C08J 7/04 and groups listed C08J 7/054 in this Warning](#) should be considered in order to perform a complete search.
- M C08J 7/056
- Forming hydrophilic coatings
- WARNING
Group [C08J 7/056](#) is incomplete pending reclassification of documents from [groupgroups C08J 7/04, C08J 7/042, C08J 7/0423, C08J 7/0427, C08J 7/06, and C08J 7/065](#).
[GroupsAll C08J 7/04 and groups listed C08J 7/056 in this Warning](#) should be considered in order to perform a complete search.

C C08J 7/06

- with compositions not containing macromolecular substances

WARNING

Group C08J 7/06 is impacted by reclassification into groups C08J 7/043, C08J 7/044, C08J 7/046, C08J 7/048, C08J 7/05, C08J 7/052, C08J 7/054, and C08J 7/056.

All groups listed in this Warning should be considered in order to perform a complete search.

C C08J 7/065

- • {Low-molecular-weight organic substances, e.g. absorption of additives in the surface of the article}

WARNING

Group C08J 7/065 is impacted by reclassification into groups C08J 7/043, C08J 7/044, C08J 7/046, C08J 7/048, C08J 7/05, C08J 7/052, C08J 7/054, and C08J 7/056.

All groups listed in this Warning should be considered in order to perform a complete search.

Project: N/A (C09J)

C09J

ADHESIVES; NON-MECHANICAL ASPECTS OF ADHESIVE PROCESSES IN GENERAL; ADHESIVE PROCESSES NOT PROVIDED FOR ELSEWHERE; USE OF MATERIAL AS ADHESIVES (surgical adhesives [A61L 24/00](#); adhesives on the basis of non- specified organic macromolecular compounds used as bonding agents in layered products [B32B](#); organic labelling fabrics or comparable materials or articles with deformable surface using adhesives and thermo-activatable adhesives respectively [B65C 5/02](#), [B65C 5/04](#); preparation of glue or gelatine [C09H](#); adhesive labels, tag tickets or similar identification of indication means [G09F 3/10](#))

NOTES

1. In this subclass, the following terms or expressions are used with the meanings indicated:
2. "use of materials as adhesives" means the use of known or new polymers or products;
 - "rubber" includes:
 - a. natural or conjugated diene rubbers;
 - b. rubber in general (for a specific rubber, other than a natural rubber or a conjugated diene rubber, see the group provided for adhesives based on such macromolecular compounds);
 - "based on" is defined by means of Note 3, below.
3. In this subclass, adhesives containing specific macromolecular substances are classified only according to the macromolecular substance, non-macromolecular substances not being taken into account.
 - Example: an adhesive containing polyethene and amino-propyltrimethoxysilane is classified in group [C09J 123/06](#).
 - However, adhesives containing combinations of organic non-macromolecular compounds having at least one polymerisable carbon-to-carbon unsaturated bond with prepolymers or polymers other than unsaturated polymers of groups [C09J 159/00](#) - [C09J 187/00](#) are classified according to the unsaturated non-macromolecular component in group [C09J 4/00](#).
 - Example: an adhesive containing polyethene and styrene monomer is classified in group [C09J 4/06](#).
 - Aspects relating to the physical nature of the adhesives or to the effects produced, as defined in group [C09J 9/00](#), if clearly and explicitly stated, are also classified in this subclass.

- Adhesives characterised by other features, e.g. additives, are classified in group [C09J 11/00](#), unless the macromolecular constituent is specified.

4. In this subclass, adhesives comprising two or more macromolecular constituents are classified according to the macromolecular constituent or constituents present in the highest proportion, i.e. the constituent on which the adhesive is based. If the adhesive is based on two or more constituents, present in equal proportions, the adhesive is classified according to each of these constituents.

- Examples: An adhesive containing 80 parts of polyethene and 20 parts of polyvinylchloride is classified in group [C09J 123/06](#); a n adhesive containing 40 parts of polyethene and 40 parts of polyvinylchloride is classified in groups [C09J 123/06](#) and [C09J 127/06](#).

~~5.~~ {An adhesive composition containing polyethylene and amino-propyltrimethoxysilane is classified in groups [C09J 123/06](#) and [C08K 5/544](#)}

~~6.~~ 5. {In this subclass, combination sets [C-Sets] are used. The detailed information about the C-Sets construction and the associated syntax rules are found in the Definitions of [C09J](#) }

~~7.~~ 6. {In addition to note (5), [C08L 2666/00](#) indexing codes were used for C-Sets classification of documents before April 2012 (see also C-Sets search rules in [C08L](#), [C09D](#), in [C09J](#) definition) }

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

C09J 4/02	covered by	C09J 4/00
C09J 4/04	covered by	C09J 4/00
C09J 161/08 - C09J 161/10	covered by	C09J 161/06
C09J 163/02	covered by	C09J 163/00
C09J 183/05	covered by	C09J 183/04
C09J 183/07	covered by	C09J 183/04

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP0236 (C09J)

M C09J 7/00

Adhesives in the form of films or foils

NOTE

1. In this main group, multi-aspect classification is applied, so that subject matter characterised by aspects covered by more than one of its subgroups should be classified in each of those groups.

2. {In this group, the indexing codes [C09J 2203/00](#) - [C09J 2499/008](#) are used.}

WARNING

Group [C09J 7/00](#) is impacted by reclassification into group [C09J 7/10](#). Groups [C09J 7/00](#) and [C09J 7/10](#) should be considered in order to perform a complete search.

U C09J 201/00

Adhesives based on unspecified macromolecular compounds

NOTE

{In this group, C-Sets are used for classification. The detailed information about the C-Sets construction and the associated syntax rules are found in the Definitions of [C09J](#) }

U C09J 201/02

- characterised by the presence of specified groups {, e.g. terminal or pendant functional groups}

- U C09J 201/10 • • containing hydrolysable silane groups
- D C09J 2201/12 • • {by the arrangement of layers}
 <administratively transferred to [C09J 2301/12](#) ADD>
- D C09J 2201/122 • • • {the adhesive layer being present only on one side of the carrier, e.g. single-sided adhesive tape}
 <administratively transferred to [C09J 2301/122](#) ADD>
- D C09J 2201/128 • • • {the adhesive layer being present on both sides of the carrier, e.g. double-sided adhesive tape}
 <administratively transferred to [C09J 2301/124](#) ADD>
- D C09J 2201/134 • • • • {the opposite adhesive layers being different}
 <administratively transferred to [C09J 2301/1242](#) ADD>
- D C09J 2201/16 • • {by the structure of the carrier layer}
 <administratively transferred to [C09J 2301/16](#) ADD>
- D C09J 2201/162 • • • {the carrier layer being a laminate constituted by plastic layers only}
 <administratively transferred to [C09J 2301/162](#) ADD>
- D C09J 2201/20 • • {by perforations through the adhesive tape}
 <administratively transferred to [C09J 2301/18](#) ADD>
- D C09J 2201/24 • • {the adhesive being in the form of fibres}
 <administratively transferred to [C09J 2301/202](#) ADD>
- D C09J 2201/28 • • {the adhesive coating being discontinuous}
 <administratively transferred to [C09J 2301/204](#) ADD>
- D C09J 2201/32 • • {the adhesive layer comprising non-adhesive protrusions}
 <administratively transferred to [C09J 2301/206](#) ADD>
- D C09J 2201/36 • • {the adhesive layer being constituted by at least two or more adjacent or superposed adhesive layers, e.g. multilayer adhesive}
 <administratively transferred to [C09J 2301/208](#) ADD>
- D C09J 2201/40 • • {the adhesive layer being formed by alternating adhesive areas being chemically different}
 <administratively transferred to [C09J 2301/21](#) ADD>
- D C09J 2201/60 • • {by other properties}
 <administratively transferred to [C09J 2301/30](#) ADD>
- D C09J 2201/602 • • • {being conductive}
 <administratively transferred to [C09J 2301/314](#) ADD>
- D C09J 2201/606 • • • {the adhesive being pressure-sensitive, i.e. tacky at temperatures inferior to 30°C}
 <administratively transferred to [C09J 2301/302](#) ADD>
- D C09J 2201/61 • • • {the adhesive being a hot-melt, i.e. not tacky at temperatures inferior to 30°C}
 <administratively transferred to [C09J 2301/304](#) ADD>
- D C09J 2201/614 • • • {the adhesive being water-activatable}
 <administratively transferred to [C09J 2301/306](#) ADD>
- D C09J 2201/618 • • • {the adhesive losing adhesive strength when being stretched, e.g. stretch adhesive}
 <administratively transferred to [C09J 2301/308](#) ADD>

- D C09J 2201/622 . . . {the parameters being the characterising features}
<administratively transferred to [C09J 2301/312](#) ADD>
- D C09J 2201/626 . . . {the adhesive effect being based on a so-called Gecko-structure}
<administratively transferred to [C09J 2301/31](#) ADD>
- T C09J 2203/00 Applications of adhesives in processes or use of adhesives in the form of films or foils**
- D C09J 2203/10 . Use of the adhesive composition in processes
<administratively transferred to [C09J 2203/00](#) ADD>
- M C09J 2203/102 . in the form of dowels, anchors or cartridges
- D C09J 2203/30 . Use of the adhesive tape
<administratively transferred to [C09J 2203/00](#) ADD>
- M C09J 2203/302 . for bundling cables
- M C09J 2203/306 . for protecting painted surfaces, e.g. of cars
- M C09J 2203/31 . as a masking tape for painting
- M C09J 2203/314 . for carpets
- M C09J 2203/318 . for the production of liquid crystal displays
- M C09J 2203/322 . for the production of solar panels
- M C09J 2203/326 . for bonding electronic components such as wafers, chips or semiconductors
- M C09J 2203/33 . for batteries or fuel cells
- M C09J 2203/334 . as a label
- M C09J 2203/338 . as tamper-evident tape or label
- M C09J 2203/342 . for flying splice applications
- N C09J 2203/346 . for building applications e.g. wrap foil
- N C09J 2203/35 . for aeronautic or naval applications
- N C09J 2203/354 . for automotive applications
- N C09J 2203/358 . for garments and textiles
- N C09J 2203/362 . for the fabrication of shoes
- N C09J 2203/366 . for mounting tapes
- N C09J 2203/37 . for repositionable or removable tapes
- D C09J 2205/00 Other features**
<administratively transferred to [C09J 2301/00](#) ADD>
- D C09J 2205/10 . of adhesive tapes; Production process thereof
<administratively transferred to [C09J 2301/40](#) ADD>
- D C09J 2205/102 . additives as essential feature of the adhesive layer, the additive itself being indicated with the corresponding code of C08K
<administratively transferred to [C09J 2301/408](#) ADD>
- D C09J 2205/106 . additives as essential feature of the substrate, the additive itself being indicated by the corresponding code of C08K
<administratively transferred to [C09J 2301/41](#) ADD>
- D C09J 2205/11 . Presence of microspheres
<administratively transferred to [C09J 2301/412](#) ADD>
- D C09J 2205/114 . Presence of a copolymer

NOTE

This group is to be used in combination with combined indexing codes of C09J 2401/00-C09J 2499/00 in case a copolymer is present but not a blend

<administratively transferred to [C09J 2301/414](#) ADD>

- D C09J 2205/30
 - of adhesive processes in general
- D C09J 2205/302
 - • Process for debonding adherents
- D C09J 2205/306
 - • Process of pretreatment for improving adhesion of rubber on metallic surfaces
- D C09J 2205/31
 - • Use of irradiation

<administratively transferred to [C09J 2301/50](#) ADD>

<administratively transferred to [C09J 2301/502](#) ADD>

<administratively transferred to [C09J 2301/504](#) ADD>

<administratively transferred to [C09J 2301/416](#) ADD>

N C09J 2301/00 Additional features of adhesives in the form of films or foils

- N C09J 2301/10
 - characterized by the structural features of the adhesive tape or sheet
- N C09J 2301/12
 - • by the arrangement of layers
- N C09J 2301/122
 - • • the adhesive layer being present only on one side of the carrier, e.g. single-sided adhesive tape
- N C09J 2301/124
 - • • the adhesive layer being present on both sides of the carrier, e.g. double-sided adhesive tape
- N C09J 2301/1242
 - • • • the opposite adhesive layers being different
- N C09J 2301/16
 - • by the structure of the carrier layer
- N C09J 2301/162
 - • • the carrier being a laminate constituted by plastic layers only
- N C09J 2301/18
 - • characterized by perforations in the adhesive tape
- N C09J 2301/20
 - characterized by the structural features of the adhesive itself
- N C09J 2301/202
 - • the adhesive being in the form of fibres
- N C09J 2301/204
 - • the adhesive coating being discontinuous
- N C09J 2301/206
 - • the adhesive layer comprising non-adhesive protrusions
- N C09J 2301/208
 - • the adhesive layer being constituted by at least two or more adjacent or superposed adhesive layers, e.g. multilayer adhesive
- N C09J 2301/21
 - • the adhesive layer being formed by alternating adhesive areas of different nature
- N C09J 2301/30
 - characterized by the chemical, physicochemical or physical properties of the adhesive or the carrier
- N C09J 2301/302
 - • the adhesive being pressure-sensitive, i.e. tacky at temperatures inferior to 30°C
- N C09J 2301/304
 - • the adhesive being heat-activatable, i.e. not tacky at temperatures inferior to 30°C
- N C09J 2301/306
 - • the adhesive being water-activatable
- N C09J 2301/308
 - • the adhesive tape or sheet losing adhesive strength when being stretched, e.g. stretch adhesive
- N C09J 2301/31
 - • the adhesive effect being based on a Gecko structure
- N C09J 2301/312
 - • parameters being the characterizing feature
- N C09J 2301/314
 - • the adhesive layer and/or the carrier being conductive
- N C09J 2301/40
 - characterized by the presence of essential components
- N C09J 2301/408
 - • additives as essential feature of the adhesive layer
- N C09J 2301/41
 - • additives as essential feature of the carrier layer

- N C09J 2301/412 · · presence of microspheres
- N C09J 2301/414 · · presence of a copolymer
- NOTE
- This group is to be used in combination with combined indexing codes of [C09J 2401/00](#) - [C09J 2499/008](#) in case a copolymer is present but not a blend.*
- N C09J 2301/416 · · use of irradiation
- N C09J 2301/50 · · characterized by process specific features
- N C09J 2301/502 · · process for debonding adherents
- N C09J 2301/504 · · process of pretreatment for improving adhesion of rubber on metallic surfaces

Project: RP0322 (C09K)

- U C09K 2219/00 Aspects relating to the form of the liquid crystal [LC] material, or by the technical area in which LC material are used**
- U C09K 2219/17 · used as a medium, in which detection of chemical compounds takes place
- N C09K 2323/00 *Functional layers of liquid crystal optical display excluding electroactive liquid crystal layer characterised by chemical composition***
- N C09K 2323/02 · *Alignment layer characterised by chemical composition*
- N C09K 2323/021 · · *Inorganic, e.g. glass or silicon oxide*
- N C09K 2323/023 · · *Organic silicon compound, e.g. organosilicon*
- N C09K 2323/025 · · *Polyamide*
- N C09K 2323/027 · · *Polyimide*
- N C09K 2323/0271 · · · *Polyimidfluoride*
- N C09K 2323/0273 · · · *Polyimidmetalo*
- N C09K 2323/03 · *Viewing layer characterised by chemical composition*
- N C09K 2323/031 · · *Polarizer or dye*
- N C09K 2323/033 · · *Silicon compound, e.g. glass or organosilicon*
- N C09K 2323/035 · · *Ester polymer, e.g. polycarbonate, polyacrylate or polyester*
- N C09K 2323/04 · *Charge transferring layer characterised by chemical composition, i.e. conductive*
- N C09K 2323/05 · *Bonding or intermediate layer characterised by chemical composition, e.g. sealant or spacer*
- N C09K 2323/051 · · *Inorganic, e.g. glass or silicon oxide*
- N C09K 2323/053 · · *Organic silicon compound, e.g. organosilicon*
- N C09K 2323/055 · · *Epoxy*
- N C09K 2323/057 · · *Ester polymer, e.g. polycarbonate, polyacrylate or polyester*
- N C09K 2323/059 · · *Unsaturated aliphatic polymer, e.g. vinyl*
- N C09K 2323/06 · *Substrate layer characterised by chemical composition*
- N C09K 2323/061 · · *Inorganic, e.g. ceramic, metallic or glass*

Project: RP0220-F (C21B)

- U C21B 7/00 Blast furnaces (lifts associated with blast furnaces [B66B 9/06](#))**
- U C21B 7/18 · Bell-and-hopper arrangements
- M C21B 7/20 · · with appliances for distributing the burden

WARNING

Group C21B 7/20 is impacted by reclassification into group C21B 7/205.-

~~Groups C21B 7/20 and C21B 7/205 should be considered in order to perform a complete search.~~

M C21B 7/205 · · · {Details concerning the gear-box driving the charge distribution system}

WARNING

~~Group C21B 7/205 is incomplete pending reclassification of documents from group C21B 7/20.~~

~~Groups C21B 7/205 and C21B 7/20 should be considered in order to perform a complete search.~~

M C21B 2400/00 Treatment of slags originating from iron or steel processes

WARNING

~~Groups C21B 2400/00 - C21B 2400/08 are incomplete pending reclassification of documents from groups C21B 3/04, C21B 3/06, C21B 3/08, and C21B 3/10.~~

~~Groups C21B 2400/00 - C21B 2400/08, and groups C21B 3/04, C21B 3/06, C21B 3/08 and C21B 3/10 should be considered in order to perform a complete search.~~

Project: RP0394-F (C23C)

U C23C 14/00 Coating by vacuum evaporation, by sputtering or by ion implantation of the coating forming material

U C23C 14/58 · After-treatment

U C23C 14/5806 · · {Thermal treatment}

M C23C 14/582 · · · {using electron bombardment}

WARNING

~~Group C23C 14/582 is incomplete pending reclassification of documents from group C23C 14/5826.~~

~~Groups C23C 14/582 and C23C 14/5826 should be considered in order to perform a complete search.~~

M C23C 14/5826 · · {Treatment with charged particles ([C23C 14/582](#) takes precedence)}

WARNING

~~Group C23C 14/5826 is impacted by reclassification into group C23C 14/582.~~

~~Groups C23C 14/5826 and C23C 14/582 should be considered in order to perform a complete search.~~

Project: RP0085 (C25D)

M C25D PROCESSES FOR THE ELECTROLYTIC OR ELECTROPHORETIC PRODUCTION OF COATINGS; ELECTROFORMING (~~decorating textiles by metallising D06Q 1/04; manufacturing printed circuits by metal deposition H05K 3/18~~); APPARATUS THEREFOR

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

[C25D 2/00](#) covered by [B23K 28/006](#)

[C25D 5/24](#) covered by [C25D 5/34](#)

[C25D 5/26](#) covered by [C25D 5/36](#)

[C25D 5/28](#) covered by [C25D 5/38](#)

[C25D 5/30](#) covered by [C25D 5/42](#), [C25D 5/44](#)

[C25D 5/32](#) covered by [C25D 5/46](#)

C25D 19/00 covered by C25D 17/00

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

U C25D 1/00

Electroforming

M C25D 1/10

• Moulds; Masks; Masterforms ~~{, e.g. mandrels, stampers}~~

M C25D 1/12

• by electrophoresis ~~{{electrophoretic coating C25D 13/00}}~~

U C25D 3/00

Electroplating: Baths therefor

U C25D 3/02

• from solutions (C25D 5/34 - C25D 5/46 take precedence)

M C25D 3/12

• • of nickel or cobalt ~~{{C25D 3/56 takes precedence}}~~

U C25D 3/56

• • of alloys

M C25D 3/562

• • • {containing more than 50% by weight of iron or nickel or cobalt}; ~~NiP, FeP, CoP (phosphatising C25D 11/36)}~~

M C25D 3/60

• • • containing more than 50% by weight of tin ~~{; SnP}~~

Project: RP0344 (C25D)

C C25D 5/00

Electroplating characterised by the process; Pretreatment or after-treatment of workpieces

WARNING

Group C25D 5/00 is impacted by reclassification into groups C25D 5/60, C25D 5/605, C25D 5/611, C25D 5/615, C25D 5/617, C25D 5/619, C25D 5/623, C25D 5/625, C25D 5/627, and C25D 5/67.

All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP0085 (C25D)

M C25D 5/003

• {Electroplating ~~characterised by the use of using~~ gases, e.g. pressure influence ~~(removal or gases or vapours, C25D 21/04)}~~

Project: RP0344 (C25D)

F C25D 5/006
(Frozen)

• {Electroplating with applied electromagnetic field, not locally, e.g. for plating magnetic layers}

WARNING

Group C25D 5/006 is no longer used for the classification of documents as of August 1, 2020.

The content of this group is being reclassified into groups C25D 5/007, C25D 5/009, C25D 5/011, and C25D 5/013.

All groups listed in this Warning should be considered in order to perform a complete search.

N C25D 5/007

• {Electroplating using magnetic fields, e.g. magnets}

WARNING

Group C25D 5/007 is incomplete pending reclassification of documents from group C25D 5/006.

Groups C25D 5/006 and C25D 5/007 should be considered in order to perform a complete search.

- N C25D 5/009
- {Deposition of ferromagnetic material}
- WARNING
Group [C25D 5/009](#) is incomplete pending reclassification of documents from group [C25D 5/006](#).
Groups [C25D 5/006](#) and [C25D 5/009](#) should be considered in order to perform a complete search.
- N C25D 5/011
- {Electroplating using electromagnetic wave irradiation (using locally applied electromagnetic radiation [C25D 5/024](#))}
- WARNING
Group [C25D 5/011](#) is incomplete pending reclassification of documents from group [C25D 5/006](#).
Groups [C25D 5/006](#) and [C25D 5/011](#) should be considered in order to perform a complete search.
- N C25D 5/013
- {Wavelengths other than ultra-violet [UV], visible or infra-red [IR], e.g. X-rays or microwaves}
- WARNING
Group [C25D 5/013](#) is incomplete pending reclassification of documents from group [C25D 5/006](#).
Groups [C25D 5/006](#) and [C25D 5/013](#) should be considered in order to perform a complete search.

Project: RP0085 (C25D)

- U C25D 5/02
- Electroplating of selected surface areas
- T C25D 5/022
- {using masking means ~~(C25D 11/022 takes precedence)~~}
- WARNING
Group [C25D 5/022](#) is incomplete pending reclassification of documents from group [C25D 11/022](#).
Groups [C25D 11/022](#) and [C25D 5/022](#) should be considered in order to perform a complete search.
- U C25D 5/04
- Electroplating with moving electrodes
- M C25D 5/06
- • Brush or pad plating ~~{(electrodes for pad plating C25D 17/14)}~~

Project: RP0344 (C25D)

- C C25D 5/08
- Electroplating with moving electrolyte ~~{, characterised by electrolyte flow}~~, e.g. jet electroplating ~~{(spraying of electrolyte on wires strip or foils C25D 7/0642, means or devices for moving the electrolyte C25D 21/10, C25D 5/026 takes precedence using locally applied jets of electrolyte C25D 5/026)}~~
- WARNING
Group [C25D 5/08](#) is impacted by reclassification into groups [C25D 5/60](#), [C25D 5/605](#), [C25D 5/611](#), [C25D 5/615](#), [C25D 5/617](#), [C25D 5/619](#), [C25D 5/623](#), [C25D 5/625](#), and [C25D 5/627](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C C25D 5/10
- Electroplating with more than one layer of the same or of different metals (for bearings [C25D 7/10](#))
- WARNING
Group [C25D 5/10](#) is impacted by reclassification into groups [C25D 5/60](#), [C25D 5/605](#), [C25D 5/611](#), [C25D 5/615](#), [C25D 5/617](#), [C25D 5/619](#), [C25D 5/623](#), [C25D 5/625](#), and [C25D 5/627](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- C C25D 5/12
 - at least one layer being of nickel or chromium

WARNING

Group C25D 5/12 is impacted by reclassification into groups C25D 5/60, C25D 5/605, C25D 5/611, C25D 5/615, C25D 5/617, C25D 5/619, C25D 5/623, C25D 5/625, and C25D 5/627.

All groups listed in this Warning should be considered in order to perform a complete search.

- C C25D 5/14
 - two or more layers being of nickel or chromium, e.g. duplex or triplex layers

WARNING

Group C25D 5/14 is impacted by reclassification into groups C25D 5/60, C25D 5/605, C25D 5/611, C25D 5/615, C25D 5/617, C25D 5/619, C25D 5/623, C25D 5/625, and C25D 5/627.

All groups listed in this Warning should be considered in order to perform a complete search.

- C C25D 5/16
 - Electroplating with layers of varying thickness ~~{, e.g. rough surfaces}~~; Hull cells

WARNING

Group C25D 5/16 is impacted by reclassification into groups C25D 5/60, C25D 5/605, C25D 5/611, C25D 5/615, C25D 5/617, C25D 5/619, C25D 5/623, C25D 5/625, and C25D 5/627.

All groups listed in this Warning should be considered in order to perform a complete search.

- C C25D 5/18
 - Electroplating using modulated, pulsed or reversing current

WARNING

Group C25D 5/18 is impacted by reclassification into groups C25D 5/60, C25D 5/605, C25D 5/611, C25D 5/615, C25D 5/617, C25D 5/619, C25D 5/623, C25D 5/625, and C25D 5/627.

All groups listed in this Warning should be considered in order to perform a complete search.

- C C25D 5/20
 - Electroplating using ultrasonics {, vibrations}

WARNING

Group C25D 5/20 is impacted by reclassification into groups C25D 5/60, C25D 5/605, C25D 5/611, C25D 5/615, C25D 5/617, C25D 5/619, C25D 5/623, C25D 5/625, and C25D 5/627.

All groups listed in this Warning should be considered in order to perform a complete search.

- C C25D 5/22
 - Electroplating combined with mechanical treatment during the deposition

WARNING

Group C25D 5/22 is impacted by reclassification into groups C25D 5/60, C25D 5/605, C25D 5/611, C25D 5/615, C25D 5/617, C25D 5/619, C25D 5/623, C25D 5/625, and C25D 5/627.

All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP0085 (C25D)

- C C25D 5/54
- Electroplating ~~{on} non-metallic surfaces {- e.g. on carbon or carbon composites}~~ of non-metallic surfaces ([C25D 7/12](#) takes precedence)

WARNING

Group [C25D 5/54](#) is impacted by reclassification into group [C25D 5/56](#). Groups [C25D 5/54](#) and [C25D 5/56](#) should be considered in order to perform a complete search.

Project: RP0344, RP0085 (C25D)

- T C25D 5/56
- • ~~on {thin or conductive} plastics {of plastics (coating metallic material C23C)}~~

WARNING

Group [C25D 5/56](#) is incomplete pending reclassification of documents from group [C25D 5/54](#). Groups [C25D 5/54](#) and [C25D 5/56](#) should be considered in order to perform a complete search.

Project: RP0344 (C25D)

- N C25D 5/60
- {Electroplating characterised by the structure or texture of the layers}

WARNING

Group [C25D 5/60](#) is incomplete pending reclassification of documents from groups [C25D 5/00](#), [C25D 5/08](#), [C25D 5/10](#), [C25D 5/12](#), [C25D 5/14](#), [C25D 5/16](#), [C25D 5/18](#), [C25D 5/20](#), and [C25D 5/22](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N C25D 5/605
- • {Surface topography of the layers, e.g. rough, dendritic or nodular layers}

WARNING

Group [C25D 5/605](#) is incomplete pending reclassification of documents from groups [C25D 5/00](#), [C25D 5/08](#), [C25D 5/10](#), [C25D 5/12](#), [C25D 5/14](#), [C25D 5/16](#), [C25D 5/18](#), [C25D 5/20](#), and [C25D 5/22](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N C25D 5/611
- • • {Smooth layers}

WARNING

Group [C25D 5/611](#) is incomplete pending reclassification of documents from groups [C25D 5/00](#), [C25D 5/08](#), [C25D 5/10](#), [C25D 5/12](#), [C25D 5/14](#), [C25D 5/16](#), [C25D 5/18](#), [C25D 5/20](#), and [C25D 5/22](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N C25D 5/615
- • {Microstructure of the layers, e.g. mixed structure}

WARNING

Group [C25D 5/615](#) is incomplete pending reclassification of documents from groups [C25D 5/00](#), [C25D 5/08](#), [C25D 5/10](#), [C25D 5/12](#), [C25D 5/14](#), [C25D 5/16](#), [C25D 5/18](#), [C25D 5/20](#), and [C25D 5/22](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N C25D 5/617
- • • {Crystalline layers}
- WARNING
Group [C25D 5/617](#) is incomplete pending reclassification of documents from groups [C25D 5/00](#), [C25D 5/08](#), [C25D 5/10](#), [C25D 5/12](#), [C25D 5/14](#), [C25D 5/16](#), [C25D 5/18](#), [C25D 5/20](#), and [C25D 5/22](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N C25D 5/619
- • • {Amorphous layers}
- WARNING
Group [C25D 5/619](#) is incomplete pending reclassification of documents from groups [C25D 5/00](#), [C25D 5/08](#), [C25D 5/10](#), [C25D 5/12](#), [C25D 5/14](#), [C25D 5/16](#), [C25D 5/18](#), [C25D 5/20](#), and [C25D 5/22](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N C25D 5/623
- • {Porosity of the layers}
- WARNING
Group [C25D 5/623](#) is incomplete pending reclassification of documents from groups [C25D 5/00](#), [C25D 5/08](#), [C25D 5/10](#), [C25D 5/12](#), [C25D 5/14](#), [C25D 5/16](#), [C25D 5/18](#), [C25D 5/20](#), and [C25D 5/22](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N C25D 5/625
- • {Discontinuous layers, e.g. microcracked layers}
- WARNING
Group [C25D 5/625](#) is incomplete pending reclassification of documents from groups [C25D 5/00](#), [C25D 5/08](#), [C25D 5/10](#), [C25D 5/12](#), [C25D 5/14](#), [C25D 5/16](#), [C25D 5/18](#), [C25D 5/20](#), and [C25D 5/22](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N C25D 5/627
- {Electroplating characterised by the visual appearance of the layers, e.g. colour, brightness or mat appearance}
- WARNING
Group [C25D 5/627](#) is incomplete pending reclassification of documents from groups [C25D 5/00](#), [C25D 5/08](#), [C25D 5/10](#), [C25D 5/12](#), [C25D 5/14](#), [C25D 5/16](#), [C25D 5/18](#), [C25D 5/20](#), and [C25D 5/22](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N C25D 5/67
- {Electroplating to repair workpiece}
- WARNING
Group [C25D 5/67](#) is incomplete pending reclassification of documents from group [C25D 5/00](#).
Groups [C25D 5/00](#) and [C25D 5/67](#) should be considered in order to perform a complete search.

Project: RP0085 (C25D)

- C C25D 7/00 Electroplating characterised by the article coated

WARNING

Group [C25D 7/00](#) is impacted by reclassification into group [C25D 7/005](#).

Groups C25D 7/00 and C25D 7/005 should be considered in order to perform a complete search.

M C25D 7/003 • {Threaded pieces, e.g. bolts; ~~or~~ nuts}

T C25D 7/005 • {Jewels ~~or clockworks~~; *Clockworks; Coins*}

WARNING

Group C25D 7/005 is incomplete pending reclassification of documents from group C25D 7/00.

Groups C25D 7/00 and C25D 7/005 should be considered in order to perform a complete search.

C C25D 7/12 • Semiconductors

WARNING

Group C25D 7/12 is impacted by reclassification into groups C25D 7/123 and C25D 7/126.

Groups C25D 7/12, C25D 7/123, and C25D 7/126 should be considered in order to perform a complete search.

T C25D 7/123 • • {~~coated first with a seed layer, e.g. for filling vias~~ *Semiconductors first coated with a seed layer or a conductive layer*}

WARNING

Group C25D 7/123 is incomplete pending reclassification of documents from group C25D 7/12.

Groups C25D 7/12 and C25D 7/123 should be considered in order to perform a complete search.

T C25D 7/126 • • {~~Semiconductors first coated with a seed layer~~ for solar cells}

WARNING

Group C25D 7/126 is incomplete pending reclassification of documents from group C25D 7/12.

Groups C25D 7/12 and C25D 7/126 should be considered in order to perform a complete search.

U C25D 11/00 Electrolytic coating by surface reaction, i.e. forming conversion layers

U C25D 11/02 • Anodisation

C C25D 11/022 • • {Anodisation on selected surface areas}

WARNING

Group C25D 11/022 is impacted by reclassification into group C25D 5/022.

Groups C25D 11/022 and C25D 5/022 should be considered in order to perform a complete search.

M C25D 11/36 • Phosphatising {~~, e.g. NiP, CoP, FeP (bath solutions of NiP, CoP, FeP C25D 3/562)~~}

U C25D 13/00 Electrophoretic coating characterised by the process (C25D 15/00 takes precedence; compositions for electrophoretic coating C09D 5/44)

U C25D 13/22 • Servicing or operating {apparatus or multistep processes}

C C25D 13/24 • • Regeneration of process liquids

WARNING

Group C25D 13/24 is impacted by reclassification into groups C25D 21/16, C25D 21/18, C25D 21/20, and C25D 21/22.

All groups listed in this Warning should be considered in order to perform a complete search.

M	C25D 17/00	Constructional parts, or assemblies thereof, of cells for electrolytic coating (apparatus for continuously conveying articles into baths B65G, e.g. B65G 49/00; electric devices see the relevant classes, e.g. H01B, H02G) {(C25D 7/06, C25D 11/005, C25D 13/22, C25 takes precedence)}
M	C25D 17/001	· {Apparatus specially adapted for plating electrolytic coating of wafers, e.g. semiconductors, or solar cells}
M	C25D 17/007	· {Current conducting directing devices}
M	C25D 17/008	· {Current insulating shielding devices}
U	C25D 21/00	Processes for servicing or operating cells for electrolytic coating
M	C25D 21/04	· Removal of gases or vapours {; gas Gas or pressure control (electroplating characterized by the use of gases C25D 5/003)}
T	C25D 21/16	· Regeneration of process solutions {(C25D 13/24 takes precedence)}
WARNING		
<i>Groups C25D 21/16 - C25D 21/22 are incomplete pending reclassification of documents from group C25D 13/24. All groups listed in this Warning should be considered in order to perform a complete search.</i>		

Project: RP0125 (D06H)

D06H 3/00

Inspecting textile materials ~~{(unwinding or rewinding apparatus incorporating inspecting devices B65H 16/026)}~~**Project: N/A (E21B)**

E21B 28/00

Vibration generating arrangements for boreholes or wells, e.g. for stimulating production (for drilling E21B 7/24; {for fishing for or freeing objects E21B 31/005;}) for transmitting measuring-signals E21B 47/14; for geophysical measurements G01V 1/02)**WARNING**~~Group E21B 28/00 is not complete. See also E21B 43/003~~**U** E21B 41/00**Equipment or details not covered by groups E21B 15/00 - E21B 40/00****WARNING**Group [E21B 41/00](#) is incomplete pending reclassification of documents from group [E21B 41/0092](#).Group [E21B 41/00](#) is also impacted by reclassification into group [E21B 41/0099](#).Groups [E21B 41/0092](#), [E21B 41/00](#), and [E21B 41/0099](#) should be considered in order to perform a complete search.

E21B 41/08

· Underwater guide bases, e.g. drilling templates; Levelling thereof

WARNING~~This group was introduced in January 2000. Patent documents are continuously being reclassified to this group from groups E21B 7/12; E21B 33/035; E21B 43/017~~**U** E21B 43/00**Methods or apparatus for obtaining oil, gas, water, soluble or meltable materials or a slurry of minerals from wells (applicable only to water E03B; obtaining oil-bearing deposits or soluble or meltable materials by mining techniques E21C 41/00; pumps F04)****WARNING**Group [E21B 43/00](#) is incomplete pending reclassification of documents from group [E21B 41/0092](#).

Groups [E21B 41/0092](#) and [E21B 43/00](#) should be considered in order to perform a complete search.

- U E21B 43/16
 - Enhanced recovery methods for obtaining hydrocarbons (fracturing [E21B 43/26](#); obtaining slurry [E21B 43/29](#); reclamation of contaminated soil in situ [B09C](#) {; chemical compositions therefor [C09K 8/58](#)})

WARNING

Group [E21B 43/16](#) is incomplete pending reclassification of documents from group [E21B 41/0092](#).

Groups [E21B 41/0092](#) and [E21B 43/16](#) should be considered in order to perform a complete search.

- U E21B 43/24
 - • using heat, e.g. steam injection (heating, cooling or insulating wells [E21B 36/00](#) {; in combination with organic material [C09K 8/592](#)})
- U E21B 43/2406
 - • • {Steam assisted gravity drainage [SAGD]}
- E21B 43/2408
 - • • • {SAGD in combination with other methods}

WARNING

Not complete pending a reorganisation. See also E21B 43/24 and subgroups

Project: N/A (F04B)

- U F04B 45/00 **Pumps or pumping installations having flexible working members and specially adapted for elastic fluids**

- U F04B 45/08
 - having peristaltic action

WARNING

Group [F04B 45/08](#) is incomplete pending reclassification of documents from groups [F04B 45/06](#) - [F04B 45/0736](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- F04B 45/10
 - having plate-like flexible members

WARNING

Group [F04B 45/10](#) is incomplete pending reclassification of documents from groups [F04B 45/04](#) - [F04B 45/0536](#).

Groups [F04B 45/04](#) - [F04B 45/0536](#) and [F04B 45/10](#) should be considered in order to perform a complete search.

Project: RP0472 (F05B)

- M F05B **INDEXING SCHEME RELATING TO ~~MACHINES OR ENGINES OTHER THAN NON-POSITIVE-DISPLACEMENT MACHINES OR ENGINES~~ WIND, SPRING, WEIGHT, INERTIA OR LIKE MOTORS, TO MACHINES OR ENGINES FOR LIQUIDS COVERED BY SUBCLASSES F03B, TO WIND MOTORS, TO NON-POSITIVE DISPLACEMENT PUMPS, F03D AND TO GENERATING COMBUSTION PRODUCTS OF HIGH PRESSURE OR HIGH VELOCITY F03G**

NOTE

This subclass constitutes an internal scheme for indexing only.

- U F05B 2220/00 **Application**
- U F05B 2220/30
 - in turbines
- U F05B 2220/302
 - • in gas turbines
- D F05B 2220/3021
 - • • for a special turbine stage

- D F05B 2220/3022 the first stage of a turbine
- D F05B 2220/3023 an intermediate stage of the turbine
- D F05B 2220/3025 the last stage of the turbine
- D F05B 2220/303 . . . for aircraft propulsion, e.g. jet engines
- D F05B 2220/304 . . . to drive unshrouded, low solidity propeller
- D F05B 2220/305 . . . to drive unshrouded, high solidity propeller
- D F05B 2220/306 . . . to drive shrouded, low solidity propeller
- D F05B 2220/307 . . . to drive shrouded, high solidity propeller
- D F05B 2220/308 . . . providing direct vertical lift
- D F05B 2220/309 . . . in a helicopter
- D F05B 2220/33 . . specially adapted for the fan of turbofan engines
- U F05B 2220/70 . in combination with
- M F05B 2220/702 . . *the other apparatus being* a steam turbine
- N F05B 2220/703 . . *the other apparatus being* a water turbine
- M F05B 2220/704 . . *the other apparatus being* a gas turbine
- N F05B 2220/705 . . *the other apparatus being* a wind turbine
- D F05B 2220/80 . in supersonic vehicles excluding hypersonic vehicles or ram, scram or rocket propulsion
- D F05B 2220/90 . in vehicles adapted for vertical or short take off and landing (v/stol vehicles); (gas turbines providing direct vertical lift F05B 2220/308)

U F05B 2240/00**Components**NOTE

Components are the basic elements of construction.

- U F05B 2240/20 . Rotors
- U F05B 2240/30 . . Characteristics of rotor blades, i.e. of any element transforming dynamic fluid energy to or from rotational energy and being attached to a rotor
- U F05B 2240/302 . . . Segmented or sectional blades
- N F05B 2240/303 . . . *Details of the leading edge*
- N F05B 2240/304 . . . *Details of the trailing edge*
- N F05B 2240/3042 *Serrated trailing edge*
- N F05B 2240/305 . . . *Flaps, slats or spoilers*
- N F05B 2240/3052 *adjustable*
- N F05B 2240/306 . . . *Surface measures*
- N F05B 2240/3062 *Vortex generators*
- N F05B 2240/307 . . . *Blade tip, e.g. winglets*
- U F05B 2240/33 . . Shrouds which are part of or which are rotating with the rotor
- D F05B 2240/34 . . with auxiliary or secondary rotors attached to blades of main rotor
<administratively transferred to [F05B 2240/374](#) ADD>
- D F05B 2240/35 . Combustors or associated equipment
- D F05B 2240/36 . . Fuel vaporizer
- N F05B 2240/37 . . *Multiple rotors*
- N F05B 2240/372 . . . *coaxially arranged*
- N F05B 2240/374 . . . *Auxiliary rotors attached to blades of main rotor*
- U F05B 2240/80 . Platforms for stationary or moving blades

- U F05B 2240/801 · · cooled platforms
- N F05B 2240/85 · *Electrical connection arrangements*
- U F05B 2240/90 · Mounting on supporting structures or systems
- U F05B 2240/91 · · on a stationary structure
- U F05B 2240/917 · · · attached to cables
- N F05B 2240/9172 · · · · *of kite type with traction and retraction*
- N F05B 2240/9174 · · · · *of kite type with a turbine and a flying pattern*
- N F05B 2240/9176 · · · · *Wing, kites or buoyant bodies with a turbine attached without flying pattern*
- M F05B 2240/96 · · as part of a wind **turbine** farm
- N F05B 2240/965 · · *as part of a water turbine farm*

U F05B 2250/00**Geometry****NOTE**

Geometry indicates the shape or form of a component or the configuration or arrangement of components in a machine or in a plant.

- U F05B 2250/40 · Movement of component
- U F05B 2250/43 · · with three degrees of freedom
- N F05B 2250/44 · · *one element moving inside another one, e.g. wave-operated member (wom) moving inside another member (rem)*

U F05B 2260/00**Function**

- U F05B 2260/02 · Transport, e.g. specific adaptations or devices for conveyance (transport of wind turbines or equipments therefore [F03D 13/40](#))
- N F05B 2260/04 · *Deployment, e.g. installing underwater structures*
- U F05B 2260/30 · Retaining components in desired mutual position
- U F05B 2260/305 · · Reducing friction between regenerative impeller discs and casing walls
- N F05B 2260/31 · · *Locking rotor in position*
- U F05B 2260/40 · Transmission of power
- U F05B 2260/403 · · through the shape of the drive components
- U F05B 2260/4031 · · · as in toothed gearing
- U F05B 2260/40311 · · · · of the epicyclic, planetary or differential type
- N F05B 2260/40312 · · · · *Ratchet wheels*
- U F05B 2260/42 · Storage of energy
- U F05B 2260/421 · · in the form of rotational kinetic energy, e.g. in flywheels
- N F05B 2260/422 · · *in the form of potential energy, e.g. pressurized or pumped fluid*
- U F05B 2260/85 · Starting
- N F05B 2260/87 · *Using a generator as a motor*

U F05B 2270/00**Control**

- U F05B 2270/10 · Purpose of the control system
- D F05B 2270/105 · · to improve fuel economy
- D F05B 2270/1051 · · · in particular at idling speed
- D F05B 2270/106 · · to produce clean exhaust gases
- D F05B 2270/1061 · · · with as little smoke as possible
- D F05B 2270/1062 · · · with as little NOx's as possible
- D F05B 2270/1063 · · · by monitoring combustion conditions

- D F05B 2270/1064 indirectly, at the exhaust
- U F05B 2270/107 . . to cope with emergencies
- U F05B 2270/1076 . . . caused by water or hail ingestion
- N F05B 2270/1077 . . . *Storm protection*
- D F05B 2270/108 . . to cope with, or avoid, compressor flow instabilities
- D F05B 2270/1081 . . . Compressor surge or stall
- D F05B 2270/10812 caused by working fluid flow velocity profile distortion
- D F05B 2270/10815 due to high angle of attack of aircraft
- D F05B 2270/10817 due to compressor degradation
- U F05B 2270/11 . . to maintain desired vehicle trajectory parameters
- D F05B 2270/1101 . . . Altitude
- D F05B 2270/1102 . . . Speed or Mach number
- D F05B 2270/15 . . to control thermoacoustic behaviour in the combustion chambers
(counteracting noise or vibration F05B 2260/96)
- D F05B 2270/16 . . to control water or steam injection
- U F05B 2270/20 . . to optimise the performance of a machine
- N F05B 2270/202 . . . *Tuning to wave conditions*
- N F05B 2270/204 . . . *taking into account the wake effect*
- U F05B 2270/30 . Control parameters, e.g. input parameters
- D F05B 2270/31 . . Fuel schedule for stage combustors
- U F05B 2270/32 . . Wind speeds
- U F05B 2270/3201 . . . "cut-off" or "shut-down" wind speed
- N F05B 2270/3202 . . . *"cut-in" or starting wind speed*
- U F05B 2270/337 . . Electrical grid status parameters, e.g. voltage, frequency or power demand
- N F05B 2270/34 . . *Water level*
- N F05B 2270/341 . . *Liquid flow velocity or direction*
- N F05B 2270/342 . . *Wave conditions, e.g. amplitude, frequency or direction*
- U F05B 2280/00 **Materials; Properties thereof****
- U F05B 2280/40 . Organic materials
- M F05B 2280/4003 . . Synthetic polymers, e.g. plastics; **Rubber**
- D F05B 2280/4008 . . Polyamides, e.g. Aurum
 - <administratively transferred to [F05B 2280/4006](#) ADD>

Project: RP0479-F (F16L)

- U F16L 3/00 **Supports for pipes, cables or protective tubing, e.g. hangers, holders, clamps, cleats, clips, brackets (anchors for holding pipes on or under the ground [F16L 1/06](#); {sound-damping supports [F16L 55/035](#); supports for insulated pipes [F16L 59/135](#)})**
- M F16L 3/24 . . with a special member for attachment to profiled girders

WARNING

Group F16L 3/24 is impacted by reclassification into groups F16L 3/243, F16L 3/2431, and F16L 3/245.

All groups listed in this Warning should be considered in order to perform a complete search.

- M F16L 3/243
- {the special member being inserted in the profiled girder}
- WARNING**
Groups F16L 3/243 and F16L 3/2431 are incomplete pending reclassification of documents from group F16L 3/24.
All groups listed in this warning should be considered in order to perform a complete search.
- M F16L 3/245
- {the special member embracing the entire profiled girder}
- WARNING**
Group F16L 3/245 is incomplete pending reclassification of documents from group F16L 3/24.
Groups F16L 3/245 and F16L 3/24 should be considered in order to perform a complete search.

Project: N/A (F16L)

- U F16L 9/00 Rigid pipes**
- U F16L 9/18
- Double-walled pipes; Multi-channel pipes or pipe assemblies
- U F16L 9/19
- • Multi-channel pipes or pipe assemblies
- F16L 9/20
- • {Pipe assemblies}

Project: RP0479-F (F16L)

- U F16L 27/00 Adjustable joints, Joints allowing movement (of the quick-acting type F16L 37/50; for double-walled or multi-channel pipe assemblies F16L 39/04; {connecting arrangements or other fittings specially adapted to be made of plastics or to be used with pipes made of plastics F16L 47/00; connecting arrangements specially adapted for pipes of brittle material F16L 49/00})**
- M F16L 27/12
- allowing substantial longitudinal adjustment or movement (by use of screw-thread F16L 15/02)
- WARNING**
Group F16L 27/12 is impacted by reclassification into groups F16L 27/127, F16L 27/1273, F16L 27/1274, F16L 27/1275, and F16L 27/12751.
All groups listed in this Warning should be considered in order to perform a complete search.
- M F16L 27/125
- {having longitudinal and rotary movement}
- WARNING**
Group F16L 27/125 is impacted by reclassification into groups F16L 27/127, F16L 27/1273, F16L 27/1274, F16L 27/1275, and F16L 27/12751.
All groups listed in this Warning should be considered in order to perform a complete search.
- M F16L 27/127
- {with means for locking the longitudinal adjustment or movement in the final mounted position}
- WARNING**
Groups F16L 27/127, F16L 27/1273, F16L 27/1274, F16L 27/1275, and F16L 27/12751 are incomplete pending reclassification of documents from groups F16L 27/12 and F16L 27/125.
All groups listed in this warning should be considered in order to perform a complete search.

- U F16L 37/00** Couplings of the quick-acting type (radially binding sleeves [F16L 17/04](#), [F16L 21/06](#); connecting hoses to rigid members [F16L 33/00](#); connections made automatically when vehicles are brought together [B60D](#), [B61G](#); specially adapted for lubricating devices [F16N 21/00](#))
- U F16L 37/08** · in which the connection between abutting or axially overlapping ends is maintained by locking members ([F16L 37/22](#) - [F16L 37/26](#) take precedence)
- U F16L 37/084** · · combined with automatic locking
- M F16L 37/088** · · · by means of a split elastic ring
- WARNING**
Group F16L 37/088 is impacted by reclassification into groups F16L 37/0885 and F16L 37/0887.
Groups F16L 37/088, F16L 37/0885, and F16L 37/0887 should be considered in order to perform a complete search.
- M F16L 37/0885** · · · {with access to the split elastic ring from a radial or tangential opening in the coupling}
- WARNING**
Group F16L 37/0885 is incomplete pending reclassification of documents from group F16L 37/088.
Groups F16L 37/0885 and F16L 37/088 should be considered in order to perform a complete search.
- M F16L 37/0887** · · · {with an axially movable separate member for releasing the coupling}
- WARNING**
Group F16L 37/0887 is incomplete pending reclassification of documents from group F16L 37/088.
Groups F16L 37/0887 and F16L 37/088 should be considered in order to perform a complete search.
- M F16L 37/092** · · · by means of elements wedged between the pipe and the frusto-conical surface of the body of the connector
- WARNING**
Group F16L 37/092 is impacted by reclassification into groups F16L 37/0926 and F16L 37/0927.
Groups F16L 37/092, F16L 37/0926, and F16L 37/0927 should be considered in order to perform a complete search.
- M F16L 37/0925** · · · {with rings which bite into the wall of the pipe}
- WARNING**
Group F16L 37/0925 is impacted by reclassification into groups F16L 37/0926 and F16L 37/0927.
Groups F16L 37/0925, F16L 37/0926, and F16L 37/0927 should be considered in order to perform a complete search.
- M F16L 37/0926** · · · {with an inner support sleeve arranged within the pipe}
- WARNING**
Group F16L 37/0926 is incomplete pending reclassification of documents from groups F16L 37/092 and F16L 37/0925.
Groups F16L 37/0926, F16L 37/092, and F16L 37/0925 should be considered in order to perform a complete search.

- M F16L 37/0927 . . . {the wedge element being axially displaceable for releasing the coupling}
- WARNING**
Group F16L 37/0927 is incomplete pending reclassification of documents from groups F16L 37/092 and F16L 37/0925. Groups F16L 37/0927, F16L 37/092, and F16L 37/0925 should be considered in order to perform a complete search.
- U F16L 47/00 **Connecting arrangements or other fittings specially adapted to be made of plastics or to be used with pipes made of plastics {(connections for hoses of plastics F16L 33/006)}**
- M F16L 47/04 . with a swivel nut or collar engaging the pipe
- WARNING**
Group F16L 47/04 is impacted by reclassification into group F16L 47/041. Groups F16L 47/04 and F16L 47/041 should be considered in order to perform a complete search.
- M F16L 47/041 . {the plastic pipe end being flared either before or during the making of the connection}
- WARNING**
Group F16L 47/041 is incomplete pending reclassification of documents from group F16L 47/04. Groups F16L 47/041 and F16L 47/04 should be considered in order to perform a complete search.

Project: RP0171-F (F41G)

- U F41G 7/00 **Direction control systems for self-propelled missiles (flight control B64C, G05D 1/00 {; counter-measures against guided missiles F41H 11/02; spin-stabilised missiles F42B 10/26}; self-propelled or guided missiles having direction control systems only installed aboard F42B 15/01; rocket torpedoes F42B 17/00; marine torpedoes or sea-mines having self-propulsion means F42B 19/00; locating by use of radio or other waves G01S; computing aspects G06)**
- U F41G 7/20 . based on continuous observation of target position
- U F41G 7/30 . . Command link guidance systems {(homing F41G 7/2206)}
- M F41G 7/32 . . . for wire-guided missiles
- WARNING**
Group F41G 7/32 is incomplete pending reclassification of documents from groups F42B 19/01 and F42B 19/10. Groups F41G 7/32, F42B 19/01 and F42B 19/10 should be considered in order to perform a complete search.

Project: RP0171-F (F42B)

- U F42B 19/00 **Marine torpedoes, e.g. launched by surface vessels or submarines (having additional propulsion means for movement through air F42B 17/00); Sea mines having self-propulsion means (F42B 12/00 takes precedence; launching means F41F; locating by use of radio or other waves G01S; automatic control of course G05D 1/00; firing directors or calculators G06G)**
- M F42B 19/01 . Steering control
- WARNING**
Group F42B 19/01 is incomplete pending reclassification of documents from group F42B 19/10.

Group F42B 19/01 is also impacted by reclassification into groups F42B 19/10 and F41G 7/32.
All groups listed in this Warning should be considered in order to perform a complete search.

- M F42B 19/10
- remotely controlled, e.g. by sonic or radio control (control systems using wire [F41G 7/32](#))

WARNING

Group F42B 19/10 is incomplete pending reclassification of documents from group F42B 19/01.

Group F42B 19/10 is also impacted by reclassification into groups F42B 19/01 and F41G 7/32.

All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP0125 (G01B)

- U G01B 21/00
- Measuring arrangements or details thereof in so far as they are not adapted to particular types of measuring means of the preceding groups**

NOTE

Measuring arrangements or details thereof covered by two or more of groups [G01B 3/00](#) - [G01B 17/00](#) are classified in this group if no single other group can be selected as being predominantly applicable.

- U G01B 21/02
- for measuring length, width, or thickness ([G01B 21/10](#) takes precedence)
- G01B 21/06
- specially adapted for measuring length or width of objects while moving ~~{{unwinding or rewinding apparatus incorporating length measuring devices B65H 16/025}}~~

Project: RP0331 (G01C)

- C G01C 21/00
- Navigation; Navigational instruments not provided for in preceding groups [G01C 1/00](#) - [G01C 19/00](#) (measuring distance traversed on the ground by a vehicle [G01C 22/00](#); control of position, course, altitude or attitude of vehicles [G05D 1/00](#); traffic control systems for road vehicles involving transmission of navigation instructions to the vehicle [G08G 1/0968](#))**

WARNING

Group [G01C 21/00](#) is impacted by reclassification into groups [G01C 21/38](#) - [G01C 21/3896](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- U G01C 21/10
- by using measurements of speed or acceleration ([G01C 21/24](#), [G01C 21/26](#) take precedence)
- U G01C 21/12
- executed aboard the object being navigated; Dead reckoning
- C G01C 21/16
- by integrating acceleration or speed, i.e. inertial navigation

WARNING

Group [G01C 21/16](#) is impacted by reclassification into groups [G01C 21/166](#), [G01C 21/183](#), [G01C 21/185](#), and [G01C 21/188](#).

Groups [G01C 21/16](#), [G01C 21/166](#), [G01C 21/183](#), [G01C 21/185](#), and [G01C 21/188](#) should be considered in order to perform a complete search.

- C G01C 21/165 {combined with non-inertial navigation instruments}
- NOTE**
 This group does not adequately cover all aspects of this subject; see also G01S 19/49; G01S 19/47.
- WARNING**
 Group G01C 21/165 is impacted by reclassification into groups G01C 21/1652, G01C 21/1654, and G01C 21/1656. Groups G01C 21/165, G01C 21/1652, G01C 21/1654, and G01C 21/1656 should be considered in order to perform a complete search.
- N G01C 21/1652 {with ranging devices, e.g. LIDAR or RADAR}
- WARNING**
 Group G01C 21/1652 is incomplete pending reclassification of documents from group G01C 21/165. Groups G01C 21/165 and G01C 21/1652 should be considered in order to perform a complete search.
- N G01C 21/1654 {with electromagnetic compass}
- WARNING**
 Group G01C 21/1654 is incomplete pending reclassification of documents from group G01C 21/165. Groups G01C 21/165 and G01C 21/1654 should be considered in order to perform a complete search.
- N G01C 21/1656 {with passive imaging devices, e.g. cameras}
- WARNING**
 Group G01C 21/1656 is incomplete pending reclassification of documents from group G01C 21/165. Groups G01C 21/165 and G01C 21/1656 should be considered in order to perform a complete search.
- N G01C 21/166 {Mechanical, construction or arrangement details of inertial navigation systems}
- WARNING**
 Group G01C 21/166 is incomplete pending reclassification of documents from group G01C 21/16. Groups G01C 21/16 and G01C 21/166 should be considered in order to perform a complete search.
- U G01C 21/18 Stabilised platforms, e.g. by gyroscope
- N G01C 21/183 {Compensation of inertial measurements, e.g. for temperature effects}
- WARNING**
 Group G01C 21/183 is incomplete pending reclassification of documents from groups G01C 21/16. Groups G01C 21/16 and G01C 21/183 should be considered in order to perform a complete search.
- N G01C 21/185 {for gravity}
- WARNING**
 Group G01C 21/185 is incomplete pending reclassification of documents from groups G01C 21/16. Groups G01C 21/16 and G01C 21/185 should be considered in order to perform a complete search.

- N G01C 21/188 {for accumulated errors, e.g. by coupling inertial systems with absolute positioning systems}
- WARNING
Group [G01C 21/188](#) is incomplete pending reclassification of documents from groups [G01C 21/16](#).
Groups [G01C 21/16](#) and [G01C 21/188](#) should be considered in order to perform a complete search.
- U G01C 21/26 . specially adapted for navigation in a road network
- U G01C 21/28 . . with correlation of data from several navigational instruments
- U G01C 21/30 . . . Map- or contour-matching
- C G01C 21/32 Structuring or formatting of map data
- WARNING
Group [G01C 21/32](#) is impacted by reclassification into groups [G01C 21/38 - G01C 21/3896](#).
Groups [G01C 21/32](#) and [G01C 21/38 - G01C 21/3896](#) should be considered in order to perform a complete search.
- U G01C 21/34 . . Route searching; Route guidance
- U G01C 21/36 . . . Input/output arrangements for on-board computers
- M G01C 21/3697 {~~output~~ **Output** of additional, non-guidance related information, e.g. low fuel level, ~~fuel efficient driving, gear change, speeding, dangerous curve ahead, slippery road, school zone, speed traps, driving behaviour feedback, advertising, virtual billboards or road signs~~ ([G01C 21/3679](#) takes precedence)}
- N G01C 21/38 . {*Electronic maps specially adapted for navigation; Updating thereof*}
- WARNING
Groups [G01C 21/38 - G01C 21/3896](#) are incomplete pending reclassification of documents from groups [G01C 21/00](#) and [G01C 21/32](#).
Groups [G01C 21/00](#), [G01C 21/32](#), and [G01C 21/38 - G01C 21/3896](#) should be considered in order to perform a complete search.
- N G01C 21/3804 . . {*Creation or updating of map data*}
- N G01C 21/3807 . . . {*characterised by the type of data*}
- N G01C 21/3811 {*Point data, e.g. Point of Interest [POI]*}
- N G01C 21/3815 {*Road data*}
- N G01C 21/3819 {*Road shape data, e.g. outline of a route*}
- N G01C 21/3822 {*Road feature data, e.g. slope data*}
- N G01C 21/3826 {*Terrain data*}
- N G01C 21/383 {*Indoor data*}
- N G01C 21/3833 . . . {*characterised by the source of data*}
- N G01C 21/3837 {*Data obtained from a single source*}
- N G01C 21/3841 {*Data obtained from two or more sources, e.g. probe vehicles*}
- N G01C 21/3844 {*Data obtained from position sensors only, e.g. from inertial navigation*}
- N G01C 21/3848 {*Data obtained from both position sensors and additional sensors*}
- N G01C 21/3852 {*Data derived from aerial or satellite images*}
- N G01C 21/3856 {*Data obtained from user input*}
- N G01C 21/3859 . . . {*Differential updating map data*}
- N G01C 21/3863 . . {*Structures of map data*}

- N G01C 21/3867 . . . {Geometry of map features, e.g. shape points, polygons or for simplified maps}
- N G01C 21/387 . . . {Organisation of map data, e.g. version management or database structures}
- N G01C 21/3874 {Structures specially adapted for data searching and retrieval}
- N G01C 21/3878 {Hierarchical structures, e.g. layering}
- N G01C 21/3881 {Tile-based structures}
- N G01C 21/3885 . . {Transmission of map data to client devices; Reception of map data by client devices}
- N G01C 21/3889 . . . {Transmission of selected map data, e.g. depending on route}
- N G01C 21/3893 . . . {Transmission of map data from distributed sources, e.g. from roadside stations}
- N G01C 21/3896 . . . {Transmission of map data from central databases}

Project: MP0457 (G01D)**M G01D**

MEASURING NOT SPECIALLY ADAPTED FOR A SPECIFIC VARIABLE; ARRANGEMENTS FOR MEASURING TWO OR MORE VARIABLES NOT COVERED IN A SINGLE OTHER SUBCLASS; TARIFF METERING APPARATUS; MEASURING OR TESTING NOT OTHERWISE PROVIDED FOR (~~means structurally associated with lightning or other over-voltage discharging apparatus for recording the operation thereof G01R; displaying information in general G09F; recording in a way which requires playback through a transducer G11B~~)

NOTES

1. This subclass covers :

- devices for indicating or recording the results of measurements, not peculiar to variables covered by a single other subclass;
- analogous apparatus but in which the input is not a variable to be measured, e.g. a hand operation;
- details of measuring instruments, which are of general interest;
- measurement transducers not adapted solely for the measurement of a single specified variable and not provided for elsewhere, i.e. means for converting the output of a sensing member to another variable where the form or nature of the sensing member does not constrain the means for converting;
- measuring or testing not otherwise provided for.

2. Attention is drawn to the Notes following the title of class [G01](#).

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

M G01D 1/00

Measuring arrangements giving results other than momentary value of variable, of general application ([G01D 3/00](#) takes precedence; in tariff metering apparatus [G01D 4/00](#); transducers not specially adapted for a specific variable [G01D 5/00](#); ~~computing G06~~)

M G01D 1/18

- with arrangements for signalling that a predetermined value of an unspecified parameter has been exceeded ([G01D 1/14](#) takes precedence; ~~for a specified parameter, see the subclass relevant to this parameter, e.g. level of a liquid exceeded G01F, temperature exceeded G01K~~)

- M G01D 4/00** **Tariff metering apparatus (~~tariff meters for measuring the time integral of electric power or current G01R 11/56~~; in taximeters [G07B 13/00](#); ~~coin-feed mechanisms therefor G07F~~; ~~apparatus actuated by coins, cards or the like with meter-controlled dispensing of liquid, gas, or electricity G07F 15/00~~)**
- U G01D 4/02 · Details
- M G01D 4/04 · · Resetting-mechanisms, e.g. for indicating members ~~(for mechanical counters G06M 1/28)~~
- M G01D 4/08 · · Transfer of indication from a counter into a summing counter ~~((mechanical counters G06M))~~
- U G01D 5/00** **Mechanical means for transferring the output of a sensing member; Means for converting the output of a sensing member to another variable where the form or nature of the sensing member does not constrain the means for converting; Transducers not specially adapted for a specific variable ([G01D 3/00](#) takes precedence; specially adapted for apparatus giving results other than momentary value of variable [G01D 1/00](#); sensing members, see the relevant subclasses, e.g. of [G01](#), [H01](#); for converting a single current or a single voltage into a mechanical displacement [G01R 5/00](#); specially adapted for high-voltage or high-current measuring arrangements [G01R 15/04](#), [G01R 15/14](#); measuring currents or voltages using digital measurement techniques [G01R 19/25](#); transmission systems for measured values, control or similar signals [G08C](#), e.g. electrical signals [G08C 19/00](#))**
- NOTE
- The subgroups of this main group are distinguished by the means which is of major importance. Thus the mere application of other means for giving a final indication does not affect the classification.
- U G01D 5/02 · using mechanical means
- M G01D 5/04 · · using levers; using cams; using gearing ~~(gearing in general F16)~~
- M G01D 5/06 · · acting through a wall or enclosure, e.g. by bellows, by magnetic coupling ~~(in general F16)~~
- U G01D 11/00** **Component parts of measuring arrangements not specially adapted for a specific variable ([G01D 13/00](#), [G01D 15/00](#) take precedence)**
- M G01D 11/02 · Bearings or suspensions for moving parts ~~(bearings in general F16C)~~
- M G01D 11/04 · · ~~Knife~~**Knive**-edge bearings
- M G01D 11/30 · Supports specially adapted for an instrument; Supports specially adapted for a set of instruments ~~(in general F16M; specially adapted for aircraft, or vehicles; see the relevant subclasses)~~
- U G01D 15/00** **Component parts of recorders for measuring arrangements not specially adapted for a specific variable**
- M G01D 15/16 · Recording elements transferring recording material, e.g. ink, to the recording surface (printing recording elements [G01D 15/20](#); ~~implements for writing or drawing in general B43K~~)
- U G01D 15/24 · Drives for recording elements and surfaces not covered by [G01D 5/00](#)
- M G01D 15/26 · · operating by clockwork ~~(clockworks per se G04B, G04C)~~

Project: MP0457 (G01F)

- M G01F** **MEASURING VOLUME, VOLUME FLOW, MASS FLOW OR LIQUID LEVEL; METERING BY VOLUME** (~~milk flow sensing devices in milking machines or devices A01J 5/01; measuring or recording blood flow A61B 5/02, A61B 8/06; metering media to the human body A61M 5/168; burettes or pipettes B01L 3/02; arrangements of liquid volume meters or volume-flow meters in liquid-delivering apparatus, e.g. for retail sale purposes, B67D 7/16; pumps, fluid motors, details common to measuring or metering devices and pumps or fluid motors F01–F04; {sampling G01N 1/00}; locating, determining distance or velocity using reflection or reradiation of radio waves, analogous arrangements using other waves G01S; systems for ratio control G05D 11/00; {coin-freed apparatus for metering flow of liquid or gas G07F 15/00}~~)
- NOTE
Attention is drawn to the Notes following the title of class [G01](#).
- WARNING
In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.
- M G01F 1/00** **Measuring the volume flow or mass flow of fluid or fluent solid material wherein the fluid passes through the meter in a continuous flow** (measuring a proportion of the volume flow [G01F 5/00](#); ~~measuring speed of flow G01P 5/00; indicating presence or absence of flow G01P 13/00; regulating quantity or ratio {G05D 7/00, G05D 11/02}~~)
- NOTE
[G01F 1/72](#), [G01F 1/74](#) and [G01F 1/76](#) take precedence over [G01F 1/05](#) - [G01F 1/68](#)
- U G01F 1/05 • by using mechanical effects
- U G01F 1/34 • • by measuring pressure or differential pressure
- U G01F 1/36 • • • the pressure or differential pressure being created by the use of flow constriction
- U G01F 1/40 • • • • Details or construction of the flow constriction devices
- M G01F 1/46 • • • • • Pitot tubes (~~especially adapted for measuring speed of fluids G01P 5/165~~)
- U G01F 1/704 • using marked regions or existing inhomogeneities within the fluid stream, e.g. statistically occurring variations in a fluid parameter ([G01F 1/76](#), [G01F 25/00](#) take precedence)
- U G01F 1/708 • • Measuring the time taken to traverse a fixed distance
- M G01F 1/712 • • • using auto-correlation or cross-correlation detection means ~~{([G01F 1/7082](#) - [G01F 1/7088](#) take precedence); measuring speed by using correlation means in general G01P 3/80, G01P 5/22}~~
- M G01F 1/76 • Devices for measuring mass flow of a fluid or a fluent solid material (~~weighing a continuous stream of material during flow G01G 11/00~~)
- U G01F 3/00** **Measuring the volume flow of fluids or fluent solid material wherein the fluid passes through the meter in successive and more or less isolated quantities, the meter being driven by the flow** (measuring a proportion of the volume flow [G01F 5/00](#))
- U G01F 3/02 • with measuring chambers which expand or contract during measurement
- M G01F 3/20 • • having flexible movable walls, e.g. diaphragms, bellows (~~diaphragms and bellows therefor G01F 15/16~~)

- U G01F 11/00** Apparatus requiring external operation and adapted at each repeated and identical operation to measure and separate a predetermined volume of fluid or fluent solid material from a supply or container without regard to weight and to deliver it
- U G01F 11/02 · with measuring chambers which expand or contract during measurement
- M G01F 11/08 · · of the diaphragm or bellows type ~~(diaphragms or bellows therefor G01F 15/16)~~
- M G01F 11/28 · with stationary measuring chambers having constant volume during measurement ~~(with measuring chambers which expand or contract during measurement G01F 11/02)~~
- U G01F 15/00** Details of, or accessories for, apparatus of the preceding groups insofar as such details or appliances are not adapted to particular types of such apparatus
- M G01F 15/12 · Cleaning arrangements; Filters ~~(filters in general B01D)~~
- M G01F 19/00** Calibrated capacity measures for fluids or fluent solid material, e.g. measuring-cups { **cups** (powder measuring spoons A61J; burettes, weighing bottles B01L)}
- M G01F 23/00** Indicating or measuring liquid level, or level of fluent solid material, e.g. indicating in terms of volume, indicating by means of an alarm ~~(in wells E21B 47/04; adaptation to, or mounting on, steam boilers F22B 37/78; level regulation G05D; alarm devices G08B; {for accumulators H01M 10/48})~~
- M G01F 23/14 · by measurement of pressure ~~(measuring pressure in general G01L)~~
- M G01F 23/20 · by measurement of weight, e.g. to determine the level of stored liquefied gas ~~(weighing in general G01G)~~
- M G01F 23/30 · by floats ~~(switches operated by floats H01H 35/18, {with magnets H01H 36/02})~~

Project: MP0457 (G01H)

- M G01H** MEASUREMENT OF MECHANICAL VIBRATIONS OR ULTRASONIC, SONIC OR INFRASONIC WAVES ~~(generation of mechanical vibrations without measurement B06B, G10K; measuring position, direction or velocity of an object G01C, G01S; measuring quasi-steady pressure of a fluid G01L 7/00; determining unbalance G01M 1/14; determining properties of material by sonic or ultrasonic waves transmitted therethrough G01N; systems using the reflection or reradiation of acoustic waves, e.g. acoustic imaging, G01S 15/00; seismology, seismic prospecting, acoustic prospecting G01V 1/00; acousto-optical devices per se G02F; obtaining records by techniques analogous to photography using ultrasonic, sonic or infrasonic waves G03B 42/06; speech analysis or synthesis, speech recognition G10L; information storage based on relative movement between record carrier and transducer G11B; piezo-electric, electrostrictive or magnetostrictive elements in general H01L; manufacture of electromechanical resonators by processes which include measurement of frequency with consequential modification of the resonator H03H 3/00; {H03H 3/007, H03H 9/00})~~

NOTES

1. This subclass covers the combination of generation and measurement of mechanical vibrations.
2. Attention is drawn to the Notes following the title of class [G01](#).

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

- M G01H 7/00** Measuring reverberation time ~~{; {Roomroom acoustic measurements}~~~~{measuring absorption of vibrations in a material G01N; modifying acoustic properties to change reverberation time G10K}~~
- M G01H 11/00** Measuring mechanical vibrations or ultrasonic, sonic or infrasonic waves by detecting changes in electric or magnetic properties ~~{; e.g. capacitance or reluctance (structural combination of musical instruments with microphones or other pick-up devices G10H 3/16, G10H 3/18, G10H 3/20)}~~

Project: MP0471 (G02B)

- U G02B 6/00** Light guides
- M G02B 6/10**
 - of the optical waveguide type ([G02B 6/02](#), [G02B 6/24](#) take precedence; devices or arrangements for the control of light by electric, magnetic, electro-magnetic or acoustic means [G02F 1/00](#); transferring the modulation of modulated light [G02F 2/00](#); optical logic elements [G02F 3/00](#); optical analogue/digital converters [G02F 7/00](#); stores using opto-electronic devices [G11C 11/42](#) ~~{; using electro-optical elements G11C 13/047}~~; electric waveguides [H01P](#); transmission of information by optical means [H04B 10/00](#); multiplex systems [H04J 14/00](#))
- M G02B 6/12**
 - • of the integrated circuit kind (production or processing of single crystals [C30B](#); electric integrated circuits [H01L 27/00](#) ~~{; coupling fibres and integrated optical circuits G02B 6/30}~~)

Project: MP0462 (G02B)

- U G02B 6/24**
 - Coupling light guides (for electric waveguides [H01P 1/00](#))
- U G02B 6/255**
 - • Splicing of light guides, e.g. by fusion or bonding
- M G02B 6/2551**
 - • • {using thermal methods, e.g. fusion welding by arc discharge, laser beam, plasma torch ~~(making optical fibres with heat application C03B 37/15)}~~

Project: MP0471 (G02B)

- M G02B 6/36**
 - • Mechanical coupling means (~~{G02B 6/06, G02B 6/30, G02B 6/35, G02B 6/38}~~, [G02B 6/255](#), [G02B 6/42](#) take precedence)

Project: RP0595 (G03F)

- M G03F 1/00** Originals for photomechanical production of textured or patterned surfaces, e.g., masks, photo-masks, reticles; Mask blanks or pellicles therefor; Containers specially adapted therefor; Preparation thereof

NOTE

In this group, the first place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place.

WARNING

Groups G03F 1/0007-G03F 1/16 are no longer used for the classification of documents as of January 1, 2012. The backfile of these groups is being reclassified into groups G03F 1/20-G03F 1/92 as follows: G03F 1/0007-G03F 1/0092 and G03F 1/08-G03F 1/16 into groups G03F 1/20-G03F 1/86; G03F 1/02 into G03F 1/88; G03F 1/04 into G03F 1/90; G03F 1/06 into G03F 1/92. Until reclassification is complete, groups G03F 1/0007-G03F 1/16 and G03F 1/20-G03F 1/92 should be considered in order to perform a complete search.

- D G03F 1/0007
- ~~{using an elastic substrate or involving an optical distortion, e.g. for printing on non flat surfaces}~~
- <administratively transferred to [G03F 1/60](#)>
- D G03F 1/0015
- ~~{by drawing, writing, e.g. on a photosensitive surface, or by engraving, e.g. using a stylus; using a typewriter; using chemical copy sheet}~~
- <administratively transferred to [G03F 1/50](#)>
- D G03F 1/0023
- ~~{the masking pattern being obtained by the application of an ink, e.g. by traditional printing, by ink jet printing, by using a typewriter, or by the selective application of a powder, e.g. a toner}~~
- <administratively transferred to [G03F 1/50](#)>
- D G03F 1/003
- ~~{the masking pattern being obtained by thermal means, e.g. by laser ablation (thermal transfer from a ribbon, e.g. G03F 1/0023)}~~
- <administratively transferred to [G03F 1/50](#)>
- D G03F 1/0038
- ~~{using chemical means, e.g. chemical camera copying}~~
- <administratively transferred to [G03F 1/50](#)>
- D G03F 1/0046
- ~~{Phase shift masks}~~
- <administratively transferred to [G03F 1/26](#)>
- D G03F 1/0053
- ~~{Hybrid phase shift masks, i.e. combining plural types of phase-shifting pattern in a single common pattern}~~
- NOTE**
- ~~in this group the term "hybrid" is meant to involve the combination of plural types of phase-shifting pattern in a single common pattern; a mere structural, e.g. geometrical, association of masks with separate patterns is not considered hybrid;~~
 - ~~hybrid masks combining a binary pattern with a phase-shifting pattern are only classified in the group corresponding to the phase-shifting aspect, the binary pattern being considered a trivial feature in this context~~
- <administratively transferred to [G03F 1/26](#)>
- D G03F 1/0061
- ~~{Alternating phase shift masks, i.e. Levenson-Shibuya type}~~
- <administratively transferred to [G03F 1/30](#)>
- D G03F 1/0069
- ~~{Auxiliary patterns or specific arrangements of the phase-shifting elements to avoid phase-conflicts, i.e. phase-shifter layout strategies for alternating masks}~~
- <administratively transferred to [G03F 1/30](#)>
- D G03F 1/0076
- ~~{Masks with semi-transparent phase shifters, i.e. attenuated phase-shifting masks}~~
- <administratively transferred to [G03F 1/32](#)>
- D G03F 1/0084
- ~~{Masks where at least part of the patterns comprise no opaque or semi-opaque pattern elements, i.e. phase-edge masks}~~
- <administratively transferred to [G03F 1/34](#)>
- D G03F 1/0092
- ~~{Auxiliary processes relating to originals, e.g. repair, washing or inspection}~~
- <administratively transferred to [G03F 1/68](#)>
- D G03F 1/02
- ~~{by photographic processes for production of originals simulating relief}~~
- <administratively transferred to [G03F 1/88](#)>
- D G03F 1/04
- ~~{by montage processes}~~
- <administratively transferred to [G03F 1/90](#)>

- D G03F 1/06
- {from printing surfaces, e.g. using a heat or pressure sensitive foil, by pulling an impression, e.g. on a photosensitive sheet}
- <administratively transferred to [G03F 1/92](#)>
- D G03F 1/08
- {Originals having inorganic imaging layers, e.g. chrome masks (G03F 1/12 takes precedence; X-Ray absorbers G03F 1/148)}
- <administratively transferred to [G03F 1/20](#)>
- D G03F 1/10
- {by exposing and washing out pigmented or coloured organic layers; by colouring macromolecular patterns}
- <administratively transferred to [G03F 1/68](#)>
- D G03F 1/103
- {the masking pattern being obtained by modification of the polymeric pattern by energetic means, e.g. by carbonisation or by ion implantation}
- <administratively transferred to [G03F 1/68](#)>
- D G03F 1/106
- {the masking means, e.g. the dye or pigment being incorporated into the photosensitive material}
- <administratively transferred to [G03F 1/68](#)>
- D G03F 1/12
- {by exposing silver-halide-containing photosensitive materials or diazo-type materials}
- <administratively transferred to [G03F 1/88](#)>
- D G03F 1/14
- {Originals characterised by structural details, e.g. supports, cover layers, pellicle rings}
- <administratively transferred to [G03F 1/62](#)>
- D G03F 1/142
- {Pellicles, pellicle rings or continuous protective layers}
- <administratively transferred to [G03F 1/62](#)>
- D G03F 1/144
- {Auxiliary patterns; Corrected patterns, e.g. proximity correction, grey level masks (G03F 1/0046, G03F 1/146, G03F 9/00 take precedence)}
- <administratively transferred to [G03F 1/36](#)>
- D G03F 1/146
- {Originals for X-Ray exposures, X-Ray masks}
- <administratively transferred to [G03F 1/22](#)>
- D G03F 1/148
- . . {X-Ray absorbers}
- <administratively transferred to [G03F 1/22](#)>
- D G03F 1/16
- {Originals having apertures, e.g. for corpuscular lithography}
- WARNING**
- Groups G03F 1/20-G03F 1/92 are incomplete pending reclassification of documents from groups G03F 1/0007-G03F 1/16. Until reclassification is complete, groups G03F 1/0007-G03F 1/16 and G03F 1/20-G03F 1/92 should be considered in order to perform a complete search.
- <administratively transferred to [G03F 1/86](#)>
- U G03F 7/00**
- Photomechanical, e.g. photolithographic, production of textured or patterned surfaces, e.g. printing surfaces; Materials therefor, e.g. comprising photoresists; Apparatus specially adapted therefor (using photoresist structures for special production processes, see the relevant places, e.g. [B44C](#), [H01L](#), e.g. [H01L 21/00](#), [H05K](#))**
- U G03F 7/70
- {Exposure apparatus for microlithography}
- U G03F 7/70216
- {Systems for imaging mask onto workpiece}

- G03F 7/70283
 - • • {Masks or their effects on the imaging process, e.g. Fourier masks, greyscale masks, holographic masks, phase shift masks, phasemasks, lenticular masks, multiple masks, tilted masks, tandem masks (masks per se [G03F 1/14](#)[G03F 1/00](#))}
- U G03F 7/70425
 - • • {Imaging strategies, e.g. for increasing throughput, printing product fields larger than the image field, compensating lithography- or non-lithography errors, e.g. proximity correction, mix-and-match, stitching, double patterning}
- G03F 7/70433
 - • • {Layout for increasing efficiency, for compensating imaging errors, e.g. layout of exposure fields,; Use of mask features for increasing efficiency, for compensating imaging errors (circuit design per se [G06F 30/30](#); designing or making of mask [G03F 1/14](#)[G03F 1/00](#))}
- U G03F 7/70483
 - • • {Information management, control, testing, and wafer monitoring, e.g. pattern monitoring (detection arrangements [G03F 7/7085](#))}
- U G03F 7/70616
 - • • {Wafer pattern monitoring, i.e. measuring printed patterns or the aerial image at the wafer plane (optical metrology tools per se [G01B 11/02](#) and [G01B 9/04](#))}
- G03F 7/70666
 - • • • {using aerial image (aerial image measurement tools for mask inspection [G03F 1/0092](#)[G03F 1/68](#))}

Project: RP0318 (G03G)

U G03G 9/00

Developers

M G03G 9/08

- with toner particles

NOTE

1. In ~~groups~~ *the subgroups of* {[G03G 9/0802](#) - ~~G03G 9/135~~[G03G 9/1355](#)}, the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place.

2. *{In the subgroups of [G03G 9/0835](#) - [G03G 9/0839](#), [G03G 9/08786](#) - [G03G 9/08797](#), [G03G 9/0926](#) - [G03G 9/0928](#) and [G03G 9/10](#) - [G03G 9/10884](#) the common rule is applied.}*

- U G03G 9/097
 - • Plasticisers; Charge controlling agents
- U G03G 9/09783
 - • • {Organo-metallic compounds}
- U G03G 9/09791
 - • • • {Metallic soaps of higher carboxylic acids}
- C G03G 9/10
 - • characterised by carrier particles

WARNING

Group [G03G 9/10](#) is impacted by reclassification into group [G03G 9/103](#). Groups [G03G 9/10](#) and [G03G 9/103](#) should be considered in order to perform a complete search.

N G03G 9/103

- • • {Glass particles}

WARNING

Group [G03G 9/103](#) is incomplete pending reclassification of documents from group [G03G 9/10](#). Groups [G03G 9/10](#) and [G03G 9/103](#) should be considered in order to perform a complete search.

C G03G 9/107

- • • having magnetic components

WARNING

Group [G03G 9/107](#) is impacted by reclassification into groups [G03G 9/1075](#) - [G03G 9/10884](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- T G03G 9/1075 {~~Carrier particles having a multi-layered structure~~*Structural characteristics of the carrier particles, e.g. shape or crystallographic structure*}; ~~Carrier particles comprising a core~~

WARNING

Group G03G 9/1075 is incomplete pending reclassification of documents from group G03G 9/107.
Groups G03G 9/107 and G03G 9/1075 should be considered in order to perform a complete search.

- N G03G 9/108 {Ferrite carrier, e.g. magnetite}

WARNING

Groups G03G 9/108 - G03G 9/1085 are incomplete pending reclassification of documents from group G03G 9/107.
Groups G03G 9/107 and G03G 9/108 - G03G 9/1085 should be considered in order to perform a complete search.

- N G03G 9/1085 {with non-ferrous metal oxide, e.g. MgO-Fe₂O₃}

- N G03G 9/1087 {Specified elemental magnetic metal or alloy, e.g. alnico comprising iron, nickel, cobalt, and aluminum, or permalloy comprising iron and nickel}

WARNING

Group G03G 9/1087 is incomplete pending reclassification of documents from group G03G 9/107.
Groups G03G 9/107 and G03G 9/1087 should be considered in order to perform a complete search.

- N G03G 9/1088 {Binder-type carrier}

WARNING

Groups G03G 9/1088 - G03G 9/10884 are incomplete pending reclassification of documents from group G03G 9/107.
All groups listed in this Warning should be considered in order to perform a complete search.

- N G03G 9/10882 {Binder is obtained by reactions only involving carbon-carbon unsaturated bonds}

- N G03G 9/10884 {Binder is obtained other than by reactions only involving carbon-carbon unsaturated bonds}

Project: RP0145-F (G05B)

- U G05B 23/00 Testing or monitoring of control systems or parts thereof (monitoring of programme-control systems [G05B 19/048](#), [G05B 19/406](#))**

- U G05B 23/02 . Electric testing or monitoring

- D G05B 23/0202 . {in which a transfer function of a process is calculated}
—(Frozen)

WARNING

Group G05B 23/0202 is no longer used for the classification of documents as of August 1, 2018. The content of this group is being reclassified into groups G05B 23/0205 - G05B 23/0297.

Groups G05B 23/0205 - G05B 23/0297 are incomplete pending reclassification from group G05B 23/0202.

Groups G05B 23/0202 and G05B 23/0205 - G05B 23/0297 should be considered in order to perform a complete search.

- M G05B 23/0205
- {by means of a monitoring system capable of detecting and responding to faults}

WARNING

Groups G05B 23/0205 -- G05B 23/0297 are incomplete pending reclassification of documents from group G05B 23/0202. Groups G05B 23/0202 and G05B 23/0205 -- G05B 23/0297 should be considered in order to perform a complete search.

Project: MP0246 (G06F)

- M G06F 3/00
- Input arrangements for transferring data to be processed into a form capable of being handled by the computer; Output arrangements for transferring data from processing unit to output unit, e.g. interface arrangements ~~(typewriters B41J; conversion of physical variables F15B 5/00, G01; image acquisition G06T 1/00, G06F 9/00; coding, decoding or code conversion in general H03M; transmission of digital information H04L; {in regulating or control systems G05B})~~
- U G06F 3/01
- Input arrangements or combined input and output arrangements for interaction between user and computer ([G06F 3/16](#) takes precedence)
- M G06F 3/02
- • Input arrangements using manually operated switches, e.g. using keyboards or dials ~~(keyboard switches per se H01H 13/70; electronic switches characterised by the way in which the control signals are generated H03K 17/94)~~
- M G06F 3/023
- • Arrangements for converting discrete items of information into a coded form, e.g. arrangements for interpreting keyboard generated codes as alphanumeric codes, operand codes or instruction codes ~~{{coding in connection with keyboards or like devices in general H03M 11/00}}~~
- U G06F 3/03
- • Arrangements for converting the position or the displacement of a member into a coded form
- NOTE**
In this group, the first place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place.
- M G06F 3/033
- • Pointing devices displaced or positioned by the user, e.g. mice, trackballs, pens or joysticks; Accessories therefor ~~{{constructional details of joysticks G05G 9/047; arrangement for interfacing a joystick to a computer G06F 3/038 digitisers characterised by the transducing means G06F 3/041}}~~
- M G06F 3/06
- Digital input from or digital output to record carriers, ~~{, e.g. RAID, emulated record carriers, networked record carriers (recording or reproducing devices per se G11B; error detection, error correction, monitoring per se regarding storage systems G06F 11/00; accessing or addressing within memory systems or architectures G06F 12/00; information retrieval G06F 16/00)}~~
- M G06F 3/08
- • from or to individual record carriers, e.g. punched card {, memory card, integrated circuit [IC] card, ~~smart card or smart card~~ ~~(record carriers for use with machines and with at least a part designed to carry digital markings G06K 19/00; coded identity card or credit card with a coded signal G07F 7/10)}~~
- M G06F 3/14
- Digital output to display device ~~{; {Cooperation and interconnection of the display device with other functional units}(control of display in general G09G; arrangements for producing a permanent visual presentation of the output data G06K 15/00)}~~

Project: RP0224 (G06F)

U G06F 11/00 Error detection; Error correction; Monitoring (error detection, correction or monitoring in information storage based on relative movement between record carrier and transducer [G11B 20/18](#); monitoring, i.e. supervising the progress of recording or reproducing [G11B 27/36](#); in static stores [G11C 29/00](#))

NOTE

In this group the indexing codes of [G06F 1/00](#) - [G06F 15/00](#) are added

- U G06F 11/07 · Responding to the occurrence of a fault, e.g. fault tolerance
 - U G06F 11/0703 · · {Error or fault processing not based on redundancy, i.e. by taking additional measures to deal with the error or fault not making use of redundancy in operation, in hardware, or in data representation}
 - M G06F 11/0766 · · · {Error or fault reporting or storing (~~reporting or storing of non-error data~~ [G06F 11/30](#), [G06F 11/34](#))}
 - U G06F 11/22 · Detection or location of defective computer hardware by testing during standby operation or during idle time, e.g. start-up testing
 - U G06F 11/2273 · · {Test methods}
 - D G06F 2011/2278 · · · {Power-On Test, e.g. POST}
- <administratively transferred to [G06F 11/2284](#) ADD>

U G06F 17/00 Digital computing or data processing equipment or methods, specially adapted for specific functions (information retrieval, database structures or file system structures therefor [G06F 16/00](#))

- M G06F 17/40 · Data acquisition and logging (for input to computer [G06F 3/00](#) ~~{; displays as computer output~~ [G06F 3/14](#); for image data processing [G06T 9/00](#); compression in general [H03M 7/30](#); for transmission [H04B 1/66](#); for pictorial communication [H04N](#); arrangements in telecontrol or telemetry systems for selectively calling a substation from a main station [H04Q 9/00](#))

WARNING

This group is no longer used for the classification of new documents. The documents are classified in the application fields according to the references above

Project: RP0331 (G08G)

- U G08G 1/00** Traffic control systems for road vehicles (arrangement of road signs or traffic signals [E01F 9/00](#) {; automatic vehicle control [B62D](#)})
- U G08G 1/09 · Arrangements for giving variable traffic instructions ({railroad crossing signals [B61L](#); reflectors [E01F](#), [G08B](#)); indicating arrangements for variable information by selection or combination of individual elements [G09F 9/00](#))
 - U G08G 1/0962 · · having an indicator mounted inside the vehicle, e.g. giving voice messages
 - M G08G 1/0968 · · · Systems involving transmission of navigation instructions to the vehicle ~~{(navigation or navigational instruments specially adapted for navigation in a road network~~ [G01C 21/26](#))}

Project: RP0471 (G09G)

C G09G 3/00 Control arrangements or circuits, of interest only in connection with visual indicators other than cathode-ray tubes (~~optical scanning systems in general~~ [G02B 26/10](#))

WARNING

Group [G09G 3/00](#) is impacted by reclassification into groups [G09G 3/03](#) and [G09G 3/035](#).

Groups G09G 3/00, G09G 3/03, and G09G 3/035 should be considered in order to perform a complete search.

- U G09G 3/02
 - by tracing or scanning a light beam on a screen
- U G09G 3/025
 - • {with scanning or deflecting the beams in two directions or dimensions}
- N G09G 3/03
 - {*especially adapted for displays having non-planar surfaces, e.g. curved displays*}
 - WARNING
Group [G09G 3/03](#) is incomplete pending reclassification of documents from group [G09G 3/00](#).
Groups [G09G 3/00](#) and [G09G 3/03](#) should be considered in order to perform a complete search.
- N G09G 3/035
 - • {for flexible display surfaces}
 - WARNING
Group [G09G 3/035](#) is incomplete pending reclassification of documents from groups [G09G 3/00](#) and [G09G 2380/02](#).
Groups [G09G 3/00](#), [G09G 2380/02](#), and [G09G 3/035](#) should be considered in order to perform a complete search.
- U G09G 3/04
 - for presentation of a single character by selection from a plurality of characters, or by composing the character by combination of individual elements, e.g. segments {using a combination of such display devices for composing words, rows or the like, in a frame with fixed character positions}
- U G09G 3/06
 - • using controlled light sources
- M G09G 3/12
 - • • using electroluminescent elements (~~using cathode-ray tubes with phosphor screens G09G-1/00~~)
- U G09G 3/20
 - for presentation of an assembly of a number of characters, e.g. a page, by composing the assembly by combination of individual elements arranged in a matrix {no fixed position being assigned to or needed to be assigned to the individual characters or partial characters}
- U G09G 3/22
 - • using controlled light sources
- U G09G 3/28
 - • • using luminous gas-discharge panels, e.g. plasma panels
- U G09G 3/288
 - • • • using AC panels
- M G09G 3/29
 - • • • using self-shift panels {with sequential transfer of the discharges from an input position to a further display position (~~tubes therefor H01J-17/49~~)}
- U **G09G 2380/00** **Specific applications**
- C G09G 2380/02
 - ~~Applications of flexible~~ *Flexible* displays
 - WARNING
Group [G09G 2380/02](#) is impacted by reclassification into group [G09G 3/035](#).
Groups [G09G 2380/02](#) and [G09G 3/035](#) should be considered in order to perform a complete search.

Project: RP0534-F (G10B)

- M G10B 3/00 **Details or accessories**

WARNING

~~Group G10B 3/00 is impacted by reclassification into group G10B 3/24.
Groups G10B 3/00 and G10B 3/24 should be considered in order to perform a complete search.~~

M G10B 3/24 · Cases

WARNING

Group G10B 3/24 is incomplete pending reclassification of documents from group G10B 3/00.
Groups G10B 3/00 and G10B 3/24 should be considered in order to perform a complete search.

Project: MP0464 (G10K)

U G10K 11/00 **Methods or devices for transmitting, conducting or directing sound in general; Methods or devices for protecting against, or for damping, noise or other acoustic waves in general**

U G10K 11/16 · Methods or devices for protecting against, or for damping, noise or other acoustic waves in general ([G10K 11/36](#) takes precedence)

NOTE

This group does not cover protecting against, or damping of, acoustic waves adapted for particular applications, which are covered by the subclasses for these applications, provided that there is a specific provision for this aspect.

U G10K 11/175 · · using interference effects; Masking sound

NOTES

1. Sound/noise masking, classified in [G10K 11/1752](#) - [G10K 11/1754](#),
2. Acoustic noise cancellation, classified in [G10K 11/178](#)

WARNING

Group [G10K 11/175](#) is impacted by reclassification into groups [G10K 11/1752](#) and [G10K 11/1754](#).

Groups [G10K 11/175](#), [G10K 11/1752](#), and [G10K 11/1754](#) should be considered in order to perform a complete search.

U G10K 11/178 · · · by electro-acoustically regenerating the original acoustic waves in anti-phase

NOTE

{When classifying in any of the groups [G10K 11/1781](#) - [G10K 11/17861](#), classification is also made in at least one subgroup of [G10K 11/1787](#).}

WARNING

Group [G10K 11/178](#) is impacted by reclassification into groups [G10K 11/1781](#) - [G10K 11/17885](#).

All groups listed in this Warning should be considered in order to perform a complete search.

M G10K 11/1783 · · · · {handling or detecting of non-standard events or conditions, e.g. changing *operating* modes under specific operating conditions}

WARNING

Groups [G10K 11/1783](#), [G10K 11/17833](#), [G10K 11/17835](#) and [G10K 11/17837](#) are incomplete pending reclassification of documents from group [G10K 11/178](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- U G10K 11/1785 {Methods, e.g. algorithms; Devices ([G10K 11/1781](#), [G10K 11/1783](#) take precedence)}
- WARNING**
Groups [G10K 11/1785](#), [G10K 11/17853](#), [G10K 11/17854](#), [G10K 11/17855](#), [G10K 11/17857](#) and [G10K 11/17861](#) are incomplete pending reclassification of documents from group [G10K 11/178](#). All groups listed in this Warning should be considered in order to perform a complete search.
- M G10K 11/17853 {of the filter, ~~e.g. leakage tuning~~}

Project: RP0525 (G10L)

- M G10L** **SPEECH ANALYSIS OR SYNTHESIS; SPEECH RECOGNITION; SPEECH OR VOICE PROCESSING; SPEECH OR AUDIO CODING OR DECODING**
- NOTE**
This subclass does not cover:
- devices for the storage of speech **or audio** signals, which are covered by subclasses [G11B](#) and [G11C](#);
 - encoding of compressed speech signals for transmission or storage, which is covered by group [H03M 7/30](#).
- WARNING**
In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.
- U G10L 13/00** **Speech synthesis; Text to speech systems**
- U G10L 13/02 . Methods for producing synthetic speech; Speech synthesisers
- U G10L 13/04 . . Details of speech synthesis systems, e.g. synthesiser structure or memory management
- D G10L 13/043 . . . {Synthesisers specially adapted to particular applications}
<administratively transferred to [G10L 13/00](#)>
- U G10L 15/00** **Speech recognition ([G10L 17/00](#) takes precedence)**
- U G10L 15/22 . Procedures used during a speech recognition process, e.g. man-machine dialogue
- M G10L 2015/226 . . {~~Taking into account non-speech characteristics~~ **using non-speech characteristics**}
- U G10L 15/26 . Speech to text systems ([G10L 15/08](#) takes precedence)
- D G10L 15/265 . . {Speech recognisers specially adapted for particular applications (devices for signalling identity of wanted subscriber in a telephonic communication equipment controlled by voice recognition H04M 1/271; speech interaction details in interactive information services in a telephonic communication system H04M 3/4936)}
<administratively transferred to [G10L 15/26](#)>
- U G10L 17/00** **Speaker identification or verification**
- D G10L 17/005 . {Speaker recognisers specially adapted for particular applications (G07C 9/25 takes precedence)}
<administratively transferred to [G10L 17/00](#)>
- U G10L 19/00** **Speech or audio signals analysis-synthesis techniques for redundancy reduction, e.g. in vocoders; Coding or decoding of speech or audio signals, using source filter models or psychoacoustic analysis (in musical instruments [G10H](#))**

- D G10L 19/0019 · {Vocoders specially adapted for particular applications}
<administratively transferred to [G10L 19/00](#)>
- M G10L 19/008 · Multichannel audio signal coding or decoding, ~~i.e.~~ using interchannel correlation to reduce ~~redundancies~~ *redundancy*, e.g. joint-stereo, intensity-coding, *or* matrixing
- U G10L 21/00 Processing of the speech or voice signal to produce another audible or non-audible signal, e.g. visual or tactile, in order to modify its quality or its intelligibility (G10L 19/00 takes precedence)**
- M G10L 21/02 · Speech enhancement, e.g. noise reduction or echo cancellation (reducing echo effects in line transmission systems [H04B 3/20](#); echo suppression in hands-free telephones [H04M 9/08](#))
- WARNING**
*Group G10L 21/02 is incomplete pending reclassification of documents from group G10L 21/0202.
Groups G10L 21/0202 and G10L 21/02 should be considered in order to perform a complete search.*
- F G10L 21/0202 (Frozen) · · {Applications}
- WARNING**
*Group G10L 21/0202 is no longer used for the classification of documents as of August 1, 2020.
The content of this group is being reclassified into groups G10L 21/02, G10L 21/0316, G10L 21/0364, G10L 2021/03643, and G10L 2021/03646.
All groups listed in this Warning should be considered in order to perform a complete search.*
- D G10L 21/0205 · · · {Enhancement of intelligibility of clean or coded speech}
<administratively transferred to [G10L 21/0364](#)>
- M G10L 21/0316 · · by changing the amplitude
- WARNING**
*Group G10L 21/0316 is incomplete pending reclassification of documents from group G10L 21/0202.
Groups G10L 21/0202 and G10L 21/0316 should be considered in order to perform a complete search.*
- M G10L 21/0364 · · · for improving intelligibility
- WARNING**
*Group G10L 21/0364 is incomplete pending reclassification of documents from group G10L 21/0202.
Groups G10L 21/0202 and G10L 21/0364 should be considered in order to perform a complete search.*
- M G10L 2021/03643 · · · · {Diver speech}
- WARNING**
*Group G10L 2021/03643 is incomplete pending reclassification of documents from group G10L 21/0202.
Groups G10L 21/0202 and G10L 2021/03643 should be considered in order to perform a complete search.*
- M G10L 2021/03646 · · · · {Stress or Lombard effect}
- WARNING**
Group G10L 2021/03646 is incomplete pending reclassification of documents from group G10L 21/0202.

Groups G10L 21/0202 and G10L 2021/03646 should be considered in order to perform a complete search.

- M G10L 25/00 Speech or voice analysis techniques not restricted to a single one of groups [G10L 15/00](#) - [G10L 21/00](#) (*muting semiconductor-based amplifiers when some special characteristics of a signal are sensed by a speech detector, e.g. sensing when no signal is present, H03G 3/34*)

Project: RP0269 (G11B)

- U G11B 5/00 Recording by magnetisation or demagnetisation of a record carrier; Reproducing by magnetic means; Record carriers therefor ([G11B 11/00](#) {and [G11B 13/00](#)} take precedence)

NOTE

Subgroups [G11B 5/02](#) - [G11B 5/86](#) take precedence over subgroups [G11B 5/004](#) - [G11B 5/016](#)

- U G11B 5/62 · Record carriers characterised by the selection of the material (selection of magnetic materials in general [H01F 1/00](#); thin magnetic films [H01F 10/00](#))

NOTE

This group does not cover compositions, materials or processes, per se, which are covered by the relevant subclasses of section [B](#) or [C](#).

- U G11B 5/68 · · comprising one or more layers of magnetisable material homogeneously mixed with a bonding agent

- M G11B 5/70 · · · on a base layer

WARNING

Group G11B 5/70 is incomplete pending reclassification of documents from group [G11B 5/7006](#).

Groups [G11B 5/70](#) and [G11B 5/7006](#) should be considered in order to perform a complete search.

- F G11B 5/7006 (Frozen) · · · {comprising a magnetic layer on both sides covered with non-magnetic material}

WARNING

Group [G11B 5/7006](#) is no longer used for the classification of documents as of August 1, 2020.

The content of this group is being reclassified into groups [G11B 5/70](#), [G11B 5/718](#) and [G11B 5/728](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- U G11B 5/716 · · · characterised by two or more magnetic layers

- M G11B 5/718 · · · · at least one on each side of the base layer

WARNING

Group [G11B 5/718](#) is incomplete pending reclassification of documents from group [G11B 5/7006](#).

Groups [G11B 5/7006](#) and [G11B 5/718](#) should be considered in order to perform a complete search.

- C G11B 5/72 · · Protective coatings, e.g. ~~antistatic, antifriction~~ *anti-static* {or *antifriction*}

WARNING

Group [G11B 5/72](#) is impacted by reclassification into groups [G11B 5/7253](#) - [G11B 5/728](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- C G11B 5/722 . . . {containing an anticorrosive material}
- WARNING
Group [G11B 5/722](#) is impacted by reclassification into groups [G11B 5/7253](#) - [G11B 5/728](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C G11B 5/725 . . . containing a lubricant {, e.g. organic compounds (inorganic carbon protective coating [G11B 5/727](#))}
- WARNING
Group [G11B 5/725](#) is impacted by reclassification into groups [G11B 5/7253](#) - [G11B 5/728](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G11B 5/7253 . . . {Fluorocarbon lubricant}
- WARNING
Groups [G11B 5/7253](#) - [G11B 5/7257](#) are incomplete pending reclassification of documents from groups [G11B 5/72](#) - [G11B 5/725](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G11B 5/7257 {Perfluoropolyether lubricant}
- N G11B 5/726 . . . {Two or more protective coatings (inorganic carbon protective coating [G11B 5/727](#))}
- WARNING
Groups [G11B 5/726](#) - [G11B 5/7268](#) are incomplete pending reclassification of documents from groups [G11B 5/72](#) - [G11B 5/725](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G11B 5/7262 {Inorganic protective coating}
- N G11B 5/7264 {Inorganic carbon protective coating, e.g. graphite, diamond like carbon or doped carbon}
- N G11B 5/7266 {comprising a lubricant over the inorganic carbon coating}
- N G11B 5/7268 {comprising elemental nitrogen in the inorganic carbon coating}
- N G11B 5/727 . . . {Inorganic carbon protective coating, e.g. graphite, diamond like carbon or doped carbon}
- WARNING
Group [G11B 5/727](#) is incomplete pending reclassification of documents from groups [G11B 5/72](#) - [G11B 5/725](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G11B 5/728 . . . {containing a bonding agent in the protective coating}
- WARNING
Group [G11B 5/728](#) is incomplete pending reclassification of documents from groups [G11B 5/7006](#) and [G11B 5/72](#) - [G11B 5/725](#).
All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP0342 (H01F)

- U H01F 27/00 Details of transformers or inductances, in general**
- U H01F 27/34 . . . Special means for preventing or reducing unwanted electric or magnetic effects, e.g. no-load losses, reactive currents, harmonics, oscillations, leakage fields
- M H01F 27/346 . . . {Preventing or reducing leakage fields (using magnetic shields [H01F 27/365](#)[H01F 27/36](#); using auxiliary windings [H01F 27/38](#))}
- C H01F 27/36 . . . Electric or magnetic shields or screens (movable for varying inductance [H01F 21/10](#))
- WARNING**
Group [H01F 27/36](#) is impacted by reclassification into groups [H01F 27/361](#), [H01F 27/363](#) and [H01F 27/366](#).
All subgroups listed in this Warning should be considered in order to perform a complete search.
- N H01F 27/361 . . . {made of combinations of electrically conductive material and ferromagnetic material}
- WARNING**
Group [H01F 27/361](#) is incomplete pending reclassification of documents from group [H01F 27/36](#).
Groups [H01F 27/36](#) and [H01F 27/361](#) should be considered in order to perform a complete search.
- D H01F 27/362 . . . {Electric shields or screens}
<administratively transferred to [H01F 27/36](#)>
- N H01F 27/363 . . . {made of electrically conductive material}
- WARNING**
Group [H01F 27/363](#) is incomplete pending reclassification of documents from group [H01F 27/36](#).
Groups [H01F 27/36](#) and [H01F 27/363](#) should be considered in order to perform a complete search.
- D H01F 27/365 . . . {Magnetic shields or screens}
<administratively transferred to [H01F 27/36](#)>
- N H01F 27/366 . . . {made of ferromagnetic material}
- WARNING**
Group [H01F 27/366](#) is incomplete pending reclassification of documents from group [H01F 27/36](#).
Groups [H01F 27/36](#) and [H01F 27/366](#) should be considered in order to perform a complete search.
- D H01F 27/367 {using non-magnetic screens}
<administratively transferred to [H01F 27/36](#)>

Project: RP0664 (H01R)

- U H01R 4/00 Electrically-conductive connections between two or more conductive members in direct contact, i.e. touching one another; Means for effecting or maintaining such contact; Electrically-conductive connections having two or more spaced connecting locations for conductors and using contact members penetrating insulation**
- U H01R 4/10 . . . effected solely by twisting, wrapping, bending, crimping, or other permanent deformation

- U H01R 4/18
- • by crimping {{[H01R 4/01](#), [H01R 4/2495](#) take precedence; for coaxial cables [H01R 9/0518](#)}}
- D H01R 2004/181
- • • {using memory material}
 - <administratively transferred to [H01R 4/01](#)>
- U H01R 9/00**
- Structural associations of a plurality of mutually-insulated electrical connecting elements, e.g. terminal strips or terminal blocks; Terminals or binding posts mounted upon a base or in a case; Bases therefor**
- U H01R 9/03
- Connectors arranged to contact a plurality of the conductors of a multiconductor cable {, e.g. tapping connections}
- D H01R 9/032
—(Frozen)
- • {for shielded multiconductor cable (coaxial cables with one conductor surrounded by shield H01R 9/05; flat shielded cables H01R 12/594)}
- WARNING**
Groups H01R 9/032-H01R 9/038 are no longer used for the classification of new documents as from January 1, 2011.
The content of these groups is being reclassified into groups H01R 13/658–H01R 13/6599.
All groups listed in this Warning should be considered in order to perform a complete search.
- <administratively transferred to [H01R 13/65912](#)>
- D H01R 9/034
—(Frozen)
- • • {connection of the shield to an additional grounding conductor}
 - <administratively transferred to [H01R 13/65914](#)>
- D H01R 9/035
—(Frozen)
- • • {twisted pair surrounded by shield}
 - <administratively transferred to [H01R 13/65915](#)>
- D H01R 9/037
—(Frozen)
- • • {connection to shield by action of a resilient member}
 - <administratively transferred to [H01R 13/65917](#)>
- D H01R 9/038
—(Frozen)
- • • {each conductor being individually surrounded by shield}
 - <administratively transferred to [H01R 13/65918](#)>
- U H01R 13/00**
- Details of coupling devices of the kinds covered by groups [H01R 12/70](#) or [H01R 24/00](#) - [H01R 33/00](#)**
- M H01R 13/646
- specially adapted for high-frequency, e.g. structures providing an impedance match or phase match (non-coaxed protective earth or shield arrangements [H01R 13/648](#); coaxed connectors specially adapted for high frequency [H01R 24/40](#))
- WARNING**
This group and its subgroups are not complete pending completion of a reclassification, see also H01R 9/035, H01R 13/6658, H01R 24/44, H01R 24/00, H01R 12/00
- U H01R 13/648
- Protective earth or shield arrangements on coupling devices {, e.g. anti-static shielding} (coaxially arranged shields [H01R 24/38](#))
- M H01R 13/658
- • High frequency shielding arrangements, e.g. against EMI [Electro-Magnetic Interference] or EMP [Electro-Magnetic Pulse] {{coaxial coupling devices specially adapted for high frequency [H01R 24/40](#); for flat or ribbon cable connectors [H01R 12/774](#); for coaxial cable [H01R 9/05](#)}}
- WARNING**
Groups H01R 13/658–H01R 13/6599 are incomplete pending reclassification of documents from groups H01R 9/032–H01R 9/038.
All groups listed in this Warning should be considered in order to perform a complete search.

- U H01R 13/6591 . . . Specific features or arrangements of connection of shield to conductive members
- N H01R 13/65912 {for shielded multiconductor cable (coaxial cables with one conductor surrounded by shield [H01R 9/05](#); flat shielded cables [H01R 12/594](#))}
- N H01R 13/65914 {Connection of shield to additional grounding conductors}
- N H01R 13/65915 {Twisted pair of conductors surrounded by shield}
- N H01R 13/65917 {Connection to shield by means of resilient members}
- N H01R 13/65918 {wherein each conductor is individually surrounded by shield}

Project: RP0474-F (H01S)

- U H01S 3/00 **Lasers, i.e. devices using stimulated emission of electromagnetic radiation in the infrared, visible or ultraviolet wave range (semiconductors lasers [H01S 5/00](#))**
- U H01S 3/10 . Controlling the intensity, frequency, phase, polarisation or direction of the emitted radiation, e.g. switching, gating, modulating or demodulating
NOTE
Group [H01S 3/10007](#) takes precedence over groups [H01S 3/102](#) - [H01S 3/104](#)
- M H01S 3/10007 . . {in optical amplifiers}
WARNING
Group H01S 3/10007 is impacted by reclassification into groups H01S 3/1001 and H01S 3/10013.
Groups H01S 3/10007, H01S 3/1001, and H01S 3/10013 should be considered in order to perform a complete search.
- M H01S 3/1001 . . . {by controlling the optical pumping}
WARNING
Group H01S 3/1001 is incomplete pending reclassification of documents from group H01S 3/10007.
Groups H01S 3/10007 and H01S 3/1001 should be considered in order to perform a complete search.
- M H01S 3/10013 . . . {by controlling the temperature of the active medium}
WARNING
Group H01S 3/10013 is incomplete pending reclassification of documents from group H01S 3/10007.
Groups H01S 3/10007 and H01S 3/10013 should be considered in order to perform a complete search.
- U H01S 3/13 . . Stabilisation of laser output parameters, e.g. frequency, amplitude
NOTE
Group [H01S 3/1301](#) takes precedence over groups [H01S 3/131](#) - [H01S 3/134](#)
- M H01S 3/1301 . . . {in optical amplifiers}
WARNING
Group H01S 3/1301 is impacted by reclassification into groups H01S 3/13013 and H01S 3/13017.
Groups H01S 3/1301, H01S 3/13013, and H01S 3/13017 should be considered in order to perform a complete search.

- M H01S 3/13013 • • • {by controlling the optical pumping}
- WARNING
Group H01S 3/13013 is incomplete pending reclassification of documents from group H01S 3/1301.
Groups H01S 3/1301 and H01S 3/13013 should be considered in order to perform a complete search.
- M H01S 3/13017 • • • {by controlling the temperature of the active medium}
- WARNING
Group H01S 3/13017 is incomplete pending reclassification of documents from group H01S 3/1301.
Groups H01S 3/1301 and H01S 3/13017 should be considered in order to perform a complete search.
- U H01S 5/00** **Semiconductor lasers (superluminescent diodes {[H01L 33/0045](#)})**
- NOTE
Attention is drawn to Special Rules of classification at [C07F](#), which Special Rules indicate to which version of the periodic table of chemical elements CPC refers. In this group, the Periodic System used is the 8 group system indicated by Roman numerals in the Periodic Table thereunder.
- U H01S 5/04 • Processes or apparatus for excitation, e.g. pumping, {e.g. by electron beams} ([H01S 5/06](#) takes precedence)
- U H01S 5/042 • • Electrical excitation {; Circuits therefor (monolithically integrated laser drive components [H01S 5/0261](#))}
- M H01S 5/0425 • • • {Electrodes, e.g. characterised by the structure}
- WARNING
Group H01S 5/0425 is impacted by reclassification into groups H01S 5/04252, H01S 5/04253, H01S 5/04254, H01S 5/04256, and H01S 5/04257.
All groups listed in this Warning should be considered in order to perform a complete search.
- M H01S 5/04252 • • • {characterised by the material}
- WARNING
Group H01S 5/04252 is incomplete pending reclassification of documents from group H01S 5/0425.
Groups H01S 5/0425 and H01S 5/04252 should be considered in order to perform a complete search.
- M H01S 5/04253 • • • • {having specific optical properties, e.g. transparent electrodes}
- WARNING
Group H01S 5/04253 is incomplete pending reclassification of documents from group H01S 5/0425.
Groups H01S 5/0425 and H01S 5/04253 should be considered in order to perform a complete search.
- M H01S 5/04254 • • • • {characterised by the shape}
- WARNING
Group H01S 5/04254 is incomplete pending reclassification of documents from group H01S 5/0425.
Groups H01S 5/0425 and H01S 5/04254 should be considered in order to perform a complete search.

- M H01S 5/04256 . . . {characterised by the configuration}
- WARNING
Group H01S 5/04256 is incomplete pending reclassification of documents from group H01S 5/0425.
Groups H01S 5/0425 and H01S 5/04256 should be considered in order to perform a complete search.
- M H01S 5/04257 . . . {having positive and negative electrodes on the same side of the substrate}
- WARNING
Group H01S 5/04257 is incomplete pending reclassification of documents from group H01S 5/0425.
Groups H01S 5/0425 and H01S 5/04257 should be considered in order to perform a complete search.
- U H01S 5/30 . Structure or shape of the active region; Materials used for the active region
- U H01S 5/32 . . comprising PN junctions, e.g. hetero- or double- heterostructures ([H01S 5/34](#), [H01S 5/36](#) take precedence)
- M H01S 5/3202 . . {grown on specifically orientated substrates, or using orientation dependent growth}
- WARNING
Group H01S 5/3202 is impacted by reclassification into groups H01S 5/320225, H01S 5/32025 and H01S 5/320275.
All groups listed in this Warning should be considered in order to perform a complete search.
- M H01S 5/320225 . . . {polar orientation}
- WARNING
Group H01S 5/320225 is incomplete pending reclassification of documents from group H01S 5/3202.
Groups H01S 5/3202 and H01S 5/320225 should be considered in order to perform a complete search.
- M H01S 5/32025 . . . {non-polar orientation}
- WARNING
Group H01S 5/32025 is incomplete pending reclassification of documents from group H01S 5/3202.
Groups H01S 5/3202 and H01S 5/32025 should be considered in order to perform a complete search.
- M H01S 5/320275 . . . {semi-polar orientation}
- WARNING
Group H01S 5/320275 is incomplete pending reclassification of documents from group H01S 5/3202.
Groups H01S 5/3202 and H01S 5/320275 should be considered in order to perform a complete search.

Project: RP0312-F-C (H02J)

- D H02J 17/00 **Systems for supplying or distributing electric power by electromagnetic waves**
—(Frozen)

Project: RP0594 (H02K)

- U H02K 7/00** Arrangements for handling mechanical energy structurally associated with dynamo-electric machines, e.g. structural association with mechanical driving motors or auxiliary dynamo-electric machines
- M H02K 7/08 · Structural association with bearings (~~support in machine casing H02K 5/16~~)
- U H02K 9/00** Arrangements for cooling or ventilating (channels or ducts in parts of the magnetic circuit [H02K 1/20](#), [H02K 1/32](#); channels or ducts in or between conductors [H02K 3/22](#), [H02K 3/24](#))
- M H02K 9/28 · Cooling of commutators, slip-rings, or brushes, e.g. by ventilating, (~~current collectors in general H01R 39/00~~)
- U H02K 11/00** Structural association of dynamo-electric machines with electric components or with devices for shielding, monitoring or protection (casings, enclosures or supports [H02K 5/00](#))
- C H02K 11/01 · for shielding from electromagnetic fields {, i.e. structural association with shields} (means for preventing or reducing eddy-current losses in the winding heads by shielding [H02K 3/42](#))
- WARNING**
Group [H02K 11/01](#) is incomplete pending reclassification of documents from group [H02K 11/022](#).
Group [H02K 11/01](#) is also impacted by reclassification into groups [H02K 11/012](#), [H02K 11/014](#), and [H02K 11/0141](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N H02K 11/012 · {Shields associated with rotating parts, e.g. rotor cores or rotary shafts}
- WARNING**
Group [H02K 11/012](#) is incomplete pending reclassification of documents from groups [H02K 11/01](#) and [H02K 11/022](#).
Groups [H02K 11/01](#), [H02K 11/022](#) and [H02K 11/012](#) should be considered in order to perform a complete search.
- N H02K 11/014 · {Shields associated with stationary parts, e.g. stator cores}
- WARNING**
Group [H02K 11/014](#) is incomplete pending reclassification of documents from groups [H02K 11/01](#) and [H02K 11/022](#).
Groups [H02K 11/01](#), [H02K 11/022](#) and [H02K 11/014](#) should be considered in order to perform a complete search.
- N H02K 11/0141 · · {Shields associated with casings, enclosures or brackets}
- WARNING**
Group [H02K 11/0141](#) is incomplete pending reclassification of documents from groups [H02K 11/01](#) and [H02K 11/022](#).
Groups [H02K 11/01](#), [H02K 11/022](#) and [H02K 11/0141](#) should be considered in order to perform a complete search.
- U H02K 11/02 · for suppression of electromagnetic interference
- F H02K 11/022 (Frozen) · {Shields}
- WARNING**
Group [H02K 11/022](#) is no longer used for the classification of documents as of August 1, 2020).
The content of this group is being reclassified into groups [H02K 11/01](#)-[H02K 11/0141](#).

Groups H02K 11/022 and H02K 11/01 - H02K 11/0141 should be considered in order to perform a complete search.

- U H02K 15/00** **Methods or apparatus specially adapted for manufacturing, assembling, maintaining or repairing of dynamo-electric machines**
- M H02K 15/0056 · {Manufacturing winding connections (~~manufacturing connectors in general H01R 43/00~~)}
- U H02K 15/0068 · {Connecting winding sections; Forming leads; Connecting leads to terminals}
- D H02K 15/0075 · · · {for random-wound windings}
- NOTE**
Windings consisting of cables are classified in H02K 15/0068
<administratively transferred to [H02K 15/0068](#)>
- U H02K 15/04 · of windings, prior to mounting into machines (insulating windings [H02K 15/10](#), [H02K 15/12](#))
- U H02K 15/0435 · · {Wound windings}
- U H02K 15/0442 · · · {Loop windings (manufacturing of windings consisting of overlapped loops [H02K 15/0464](#))}
- D H02K 15/0457 · · · · {Random wound coils}
<administratively transferred to [H02K 15/0442](#)>

Project: MP0426 (H04B)

- M H04B** **TRANSMISSION (~~transmission systems for measured values, control or similar signals G08C; coding, decoding, code conversion, in general H03M; broadcast communication H04H; multiplex systems H04J; secret communication H04K; transmission of digital information H04L~~)**
- NOTE**
This subclass covers the transmission of information-carrying signals, the transmission being independent of the nature of the information, and includes monitoring and testing arrangements and the suppression and limitation of noise and interference.
- WARNING**
In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.
- M H04B 1/00** **Details of transmission systems, not covered by a single one of groups [H04B 3/00](#) - [H04B 13/00](#); Details of transmission systems not characterised by the medium used for transmission (~~tuning resonant circuits H03J~~)**
- NOTE**
In this group, group [H04B 1/0003](#) takes precedence over groups [H04B 1/005](#) - [H04B 1/76](#)
- M H04B 1/02 · Transmitters (~~spatial arrangements of component circuits in radio pills for living beings A61B 5/07~~)
- M H04B 1/03 · · Constructional details, e.g. casings, housings (~~adapted for airplanes B64D~~)
- M H04B 1/034 · · · Portable transmitters (~~distress beacons G01S 1/68; means for indicating the location of accidentally buried persons A63B 29/021~~)
- M H04B 1/036 · · · Cooling arrangements (~~cooling transformers H01F 27/08; cooling discharge tubes H01J 7/24, H01J 19/74~~)

- M H04B 1/04
 - Circuits ~~(of television transmitters H04N 5/38; {oscillators H03B; modulators H03C 1/00, H03C 3/00, H03C 5/00; amplifiers H03F; power supplies H04B 1/1607})~~
- M H04B 1/06
 - Receivers ~~(control of amplification H03G; television receivers H04N 5/44; H04N 5/64)~~
- M H04B 1/10
 - Means associated with receiver for limiting or suppressing noise or interference ~~{induced by transmission (interference reduction in spread spectrum systems H04B 1/7097; equalising on HF or IF H04B 7/005; diversity systems H04B 7/02; elimination of image frequencies H03D 7/18; noise suppression by control of amplification H03G 3/00, H03G 5/00, H03G 7/00; squelching H03G 3/26, H03G 3/34)}~~
- M H04B 1/12
 - Neutralising, balancing, or compensation arrangements ~~{{balancing ripple filters H04B 15/005, H02M 1/143}}~~
- M H04B 1/16
 - Circuits ~~{{demodulators H03D}}~~
- M H04B 1/20
 - for coupling gramophone pick-up, recorder output, or microphone to receiver ~~{, e.g. for Hi-Fi systems or audio/video combinations (constructional details for associated working of receivers and recording devices G11B 31/003; for television signals only H04N 5/00)}~~
- M H04B 1/59
 - Responders; Transponders ~~(relay systems H04B 7/14)~~
- M H04B 1/62
 - for providing a predistortion of the signal in the transmitter and corresponding correction in the receiver, e.g. for improving the signal/noise ratio ~~{{for optical transmitters H04B 10/58}}~~
- M H04B 1/64
 - Volume compression or expansion arrangements ~~{{for amplifiers H03G 7/00}}~~
- M H04B 1/66
 - for reducing bandwidth of signals ~~(in pictorial communication systems H04N);~~ for improving efficiency of transmission ([H04B 1/68](#) takes precedence; ~~{vocoders G10L}~~)
- M H04B 1/68
 - for wholly or partially suppressing the carrier or one side band ~~{or by using special modulation methods (modulator circuits H03C 1/52, H03C 1/60; single sideband receivers H04B 1/302; for data transmission H04L 27/02)}~~
- M H04B 3/00**
 - Line transmission systems (combined with near-field transmission systems [H04B 5/00](#); ~~constructional features of cables H01B 11/00~~)**
- U H04B 3/02
 - Details
- M H04B 3/03
 - Hybrid circuits (for transceivers [H04B 1/52](#), [H04B 1/58](#); ~~hybrid junctions of the waveguide type H01P 5/16~~)
- M H04B 3/04
 - Control of transmission; Equalising ~~(control of amplification in general H03G)~~
- M H04B 3/26
 - Improving frequency characteristic by the use of loading coils ~~(loading coils per se H01F 17/08)~~
- M H04B 3/36
 - Repeater circuits ([H04B 3/58](#) takes precedence; ~~amplifiers therefor H03F~~)
- U H04B 3/54
 - Systems for transmission via power distribution lines
- M H04B 3/58
 - Repeater circuits ~~(amplifiers therefor H03F)~~
- U H04B 7/00**
 - Radio transmission systems, i.e. using radiation field ([H04B 10/00](#), [H04B 15/00](#) take precedence)**
- U H04B 7/14
 - Relay systems
- U H04B 7/15
 - Active relay systems
- M H04B 7/155
 - Ground-based stations ([H04B 7/204](#) takes precedence ~~{; for satellite systems H04B 7/18517}~~)
- U H04B 7/204
 - Multiple access
- M H04B 7/216
 - Code division or spread-spectrum multiple access ~~{{CDMA, SSMA}}{CDMA, SSMA}; spread spectrum techniques in general H04B 1/69)~~

- U H04B 10/00** **Transmission systems employing electromagnetic waves other than radio-waves, e.g. infrared, visible or ultraviolet light, or employing corpuscular radiation, e.g. quantum communication**
- NOTE
In this group, non-optical transmission systems are classified in group [H04B 10/90](#).
- U H04B 10/25 · Arrangements specific to fibre transmission
- M H04B 10/2575 · · Radio-over-fibre, e.g. radio frequency signal modulated onto an optical carrier ~~{{sub-carrier multiplexing H04J 14/0298}}~~
- M H04B 10/2581 · · Multimode transmission ~~{{mode multiplex systems H04J 14/04}}~~
- M H04B 10/27 · Arrangements for networking ~~{{free-space networks H04B 10/11, WDM networks H04J 14/0278, specific to radio-over-fibre H04B 10/2575}}~~
- U H04B 10/50 · Transmitters
- U H04B 10/516 · · Details of coding or modulation
- M H04B 10/532 · · · Polarisation modulation ~~{{, e.g. polarisation switching or transmission of a single data stream on two orthogonal polarisations}}~~
- U H04B 10/60 · Receivers
- M H04B 10/61 · · Coherent receivers ~~{{, i.e. optical receivers using an optical local oscillator (delay line interferometer based DPSK optical receivers H04B 10/677)}}~~
- U H04B 13/00** **Transmission systems characterised by the medium used for transmission, not provided for in groups [H04B 3/00](#) - [H04B 11/00](#)**
- M H04B 13/02 · Transmission systems in which the medium consists of the earth or a large mass of water thereon, e.g. earth telegraphy ~~{{line transmission systems with earth or water return H04B 3/00; {geophysics, detecting hidden masses G01H, G01V 1/16, G01V 1/18, G01V 3/00; sonars G01S 1/72; applications of earth currents G01S 1/72, H05F 7/00; direction and distance determination with lead cables G01S 13/00}}~~
- U H04B 14/00** **Transmission systems not characterised by the medium used for transmission (details thereof [H04B 1/00](#))**
- M H04B 14/02 · characterised by the use of pulse modulation (in radio transmission relays [H04B 7/17](#); ~~transmission of digital information per se H04L~~)
- M H04B 14/04 · · using pulse code modulation ~~{{analogue/digital or digital/analogue conversion per se H03M 1/00; {for TV signals H04N 7/24}}~~
- M H04B 14/06 · · using differential modulation, e.g. delta modulation ~~{{conversion of analogue values to or from differential modulation H03M 3/00}}~~
- U H04B 15/00** **Suppression or limitation of noise or interference (by means associated with receiver [H04B 1/10](#))**
- M H04B 15/02 · Reducing interference from electric apparatus by means located at or near the interfering apparatus ~~{{structural association with dynamo-electric machines H02K 11/00}}~~
- M H04B 15/04 · · the interference being caused by substantially sinusoidal oscillations, e.g. in a receiver; ~~or~~ in a tape-recorder ~~{{reducing parasitic oscillations H03B, H03F; screening H05K 9/00}}~~

Project: RP0280 (H04H)

- U H04H 60/00** **Arrangements for broadcast applications with a direct linking to broadcast information or broadcast space-time; Broadcast-related systems**
- U H04H 60/68 · Systems specially adapted for using specific information, e.g. geographical or meteorological information

- H04H 60/72
- • using EPGs [Electronic Programme Guides] (focusing on identifying broadcast space-time [H04H 60/39](#) {; {menu type display of EPG in television receivers [H04N 5/44543](#)[H04N 21/47](#)})

Project: RP0280 (H04L)

- U H04L 12/00** **Data switching networks (interconnection of, or transfer of information or other signals between, memories, input/output devices or central processing units [G06F 13/00](#))**
- U H04L 12/28
- characterised by path configuration, e.g. local area networks [LAN], wide area networks [WAN]
- U H04L 12/2803
- • {Home automation networks}
- U H04L 12/2816
- • • {Controlling appliance services of a home automation network by calling their functionalities (arrangements in telecontrol or telemetry systems for selectively calling a substation from a main station; in which substation desired apparatus is selected for applying a control signal thereto or for obtaining measured values therefrom [H04Q 9/00](#))}
- H04L 12/282
- • • • {based on user interaction within the home (receiver circuitry for displaying additional information being controlled by a remote control apparatus [H04N 5/44582](#)[H04N 21/42204](#))}

Project: RP0280 (H04N)

- U H04N 5/00** **Details of television systems (scanning details or combination thereof with generation of supply voltages [H04N 3/00](#))**
- M H04N 5/38
- Transmitter circuitry *{for the transmission of television signals according to analogue transmission standards}* ([H04N 5/14](#) takes precedence)
- M H04N 5/44
- Receiver circuitry *{for the reception of television signals according to analogue transmission standards}* ([H04N 5/14](#) takes precedence)
- D H04N 5/4401
- • {for the reception of a digital modulated video signal}
- <administratively transferred to [H04N 21/426](#)>
- D H04N 5/4403
- • {User interfaces for controlling a television receiver or set top box [STB] through a remote control device, e.g. graphical user interfaces [GUI]; Remote control devices therefor (user interfaces for controlling a tuning device of a television receiver through a remote control [H03J 9/00](#); constructive details of casings for the remote control device [H01H 9/0235](#); remote control of peripheral devices connected to a television receiver through the remote control device of the television receiver [H04B 1/205](#); remote control devices in general [G08C](#))}
- <administratively transferred to [H04N 21/42204](#)>
- D H04N 2005/4405
- • • {Hardware details of remote control devices}
- <administratively transferred to [H04N 21/42206](#) INV>
- D H04N 2005/4407
- • • • {concerning bidirectional operation of the remote control device}
- <administratively transferred to [H04N 21/41265](#) INV>
- D H04N 2005/4408
- • • • {Display}
- <administratively transferred to [H04N 21/42208](#) INV>
- D H04N 2005/441
- • • • • {for the display of non-command information, e.g. electronic program guide [EPG], e-mail, messages or a second television channel}
- <administratively transferred to [H04N 21/42209](#) INV>
- D H04N 2005/4412
- • • • • {Dedicated function buttons, e.g. for the control of an electronic program guide [EPG], subtitles, aspect ratio, picture-in-picture or teletext}
- <administratively transferred to [H04N 21/4221](#) INV>

- D H04N 2005/4414 {for controlling a communication function, e.g. e-mail, teleshopping or an Internet browser}
<administratively transferred to [H04N 21/478](#) INV>
- D H04N 2005/4416 {Keyboard}
<administratively transferred to [H04N 21/42212](#) INV>
- D H04N 2005/4417 {Data entry}
<administratively transferred to [H04N 21/42213](#) INV>
- D H04N 2005/4419 {Alphanumerical data entry}
<administratively transferred to [H04N 21/42214](#) INV>
- D H04N 2005/4421 {Measuring key press duration}
<administratively transferred to [H04N 21/42215](#) INV>
- D H04N 2005/4423 {Remote control device emulator integrated in a peripheral device}
<administratively transferred to [H04N 21/41265](#) INV>
- D H04N 2005/4425 {Remote control device emulator integrated into a non-television apparatus, e.g. a PDA, media center or smart toy (remote control device for a television receiver integrated into a mobile phone H04M 1/72533)}
<administratively transferred to [H04N 21/4222](#) INV>
- D H04N 2005/4426 {Transmission circuitry, e.g. infrared [IR] or radio frequency [RF]}
<administratively transferred to [H04N 21/42221](#) INV>
- D H04N 2005/4428 {Non-standard components, e.g. timer, speaker, sensors for detecting position, direction or movement of the remote control, microphone, battery charging device}
<administratively transferred to [H04N 21/42222](#) INV>
- D H04N 2005/443 {Touch pad or touch panel}
<administratively transferred to [H04N 21/42224](#) INV>
- D H04N 2005/4432 {Remote control devices equipped or combined with PC-like input means, e.g. voice recognition or pointing device}
<administratively transferred to [H04N 21/42206](#) INV>
- D H04N 2005/4433 {for the control of devices in remote rooms}
<administratively transferred to [H04N 21/4227](#) INV>
- D H04N 2005/4435 {Reprogrammable remote control devices}
<administratively transferred to [H04N 21/42226](#) INV>
- D H04N 2005/4437 {capable of upgrading firmware, e.g. in case of hardware upgrades or bug fixes}
<administratively transferred to [H04N 21/42226](#) INV and [H04N 21/4586](#) INV>
- D H04N 2005/4439 {the keys being reprogrammable, e.g. soft keys}
<administratively transferred to [H04N 21/42227](#) INV>
- D H04N 2005/4441 {the reprogrammable keys being displayed on a display screen in order to reduce the number of keys on the remote control device itself}
<administratively transferred to [H04N 21/42228](#) INV>
- D H04N 2005/4442 {Remote control devices for a multi-user environment}
<administratively transferred to [H04N 21/42206](#) INV, [H04N 21/4532](#), and [H04N 21/4751](#) INV simultaneously>

- D H04N 2005/4444 . . . {Intelligent remote control devices capable of taking into account user habits, preferences or profiles}
<administratively transferred to [H04N 21/42206](#) INV and [H04N 21/4532](#) INV>
- U H04N 5/445 . . for displaying additional information ([H04N 5/50](#) takes precedence)
- M H04N 5/44504 . . . {Circuit details of the additional information generator, e.g. details of the character or graphics signal generator, overlay mixing circuits (~~graphics pattern generators for visual indicators G09G 5/36; generation of individual character patterns for visual indicators G09G 5/24~~)}
- D H04N 5/44508 . . . {multiplexed with a digital video signal}
<administratively transferred to [H04N 21/434](#)>
- D H04N 5/44513 . . . {for displaying or controlling a single function of one single apparatus, e.g. TV receiver or VCR}
<administratively transferred to [H04N 21/47](#)>
- D H04N 2005/44517 {for displaying or controlling status parameters of the television receiver, e.g. brightness, contrast, sound volume, channel number, time, stereo or mono sound modes}
<administratively transferred to [H04N 21/485](#) INV>
- D H04N 2005/44521 {for displaying information which has no relation with a video programme, e.g. subliminal info, commercial messages, notebook, calendar, cooking recipes}
<administratively transferred to [H04N 21/478](#) INV>
- D H04N 2005/44526 {for displaying subtitles}
<administratively transferred to [H04N 21/4884](#) INV>
- D H04N 2005/4453 {for displaying teletext characters}
<administratively transferred to [H04N 21/4888](#) INV>
- D H04N 2005/44534 {for displaying information generated by a single external video device, e.g. VCR, set top converter}
<administratively transferred to [H04N 21/47](#) INV>
- D H04N 2005/44539 {involving multilingual on screen display [OSD] options}
<administratively transferred to [H04N 21/4856](#) INV and [H04N 21/42653](#) INV>
- D H04N 5/44543 . . . {Menu-type displays (H04N 5/44582, H04N 5/44591 take precedence)}
<administratively transferred to [H04N 21/47](#)>
- D H04N 2005/44547 {for scheduling the TV programmes to be recorded by a video tape recorder or to be viewed on the TV receiver}
<administratively transferred to [H04N 21/47214](#) INV and [H04N 21/4334](#) INV>
- D H04N 2005/44552 {involving the use of teletext programme scheduling codes, e.g. VPS codes, G-codes}
<administratively transferred to [H04N 21/47214](#) INV>
- D H04N 2005/44556 {for programme selection}
<administratively transferred to [H04N 21/482](#) INV>
- D H04N 2005/4456 {as a user interface for communicating with the broadcast station via a return link, e.g. for subscription or transaction terminal, for teleshopping, or as an interactive entertainment terminal, e.g. for quiz, for interactive games}
<administratively transferred to [H04N 21/472](#) INV>

- D H04N 2005/44565 {the menu or graphical user interface display parameters being downloaded by the service provider or by the broadcast station}
<administratively transferred to [H04N 21/47](#) INV and [H04N 21/6547](#) INV>
- D H04N 2005/44569 {whereby user selections, preferences, or profile have an impact on the menu content}
<administratively transferred to [H04N 21/47](#) INV and [H04N 21/4532](#) INV>
- D H04N 2005/44573 {for using the television receiver as a multimedia terminal}
<administratively transferred to [H04N 21/478](#) INV>
- D H04N 2005/44578 {involving the communication via a network, e.g. local area network [LAN], wide area network [WAN], internet, intranet}
<administratively transferred to [H04N 21/478](#) INV and [H04N 21/4622](#) INV>
- D H04N 5/44582 . . . {the additional information being controlled by a remote control apparatus}
<administratively transferred to [H04N 21/47](#) and [H04N 21/42204](#)>
- D H04N 2005/44586 {whereby remote controller buttons have been transferred to the on screen display [OSD] menu}
<administratively transferred to [H04N 21/47](#) and [H04N 21/42228](#) INV>
- D H04N 5/44591 . . . {the additional information being displayed in a separate window, e.g. by using splitscreen display}
<administratively transferred to [H04N 21/47](#) and [H04N 21/4316](#)>
- D H04N 2005/44595 {the separate window being opened at the occurrence of a selection of a menu option or item}
<administratively transferred to [H04N 21/47](#) and [H04N 21/4316](#) INV>
- M H04N 5/45 Picture in picture {, e.g. displaying simultaneously another television channel in a region of the screen}
- M H04N 5/60 . . . for the sound signals ~~{for silent tuning, i.e. muting H04N 5/505}~~
- U H04N 21/00** **Selective content distribution, e.g. interactive television or video on demand [VOD] (real-time bi-directional transmission of motion video data [H04N 7/14](#) {; broadcast or conference over packet switching networks [H04L 12/18](#)})**

NOTES

1. This group covers :

- interactive video distribution processes, systems, or elements thereof, which are characterised by point-to-multipoint system configurations, and which are mainly used for motion video data unidirectional distribution or delivery resulting from interactions between systems operators, e.g. access or service providers, or users e.g. subscribers, and system elements.
- such systems include dedicated communication systems, such as television distribution systems, which primarily distribute or deliver motion video data in the manner indicated, which may, in addition, provide a framework for further, diverse data communications or services in either unidirectional or bi-directional form. However, video will occupy most of the downlink bandwidth in the distribution process.
- typically, system operators interface with transmitter-side elements or users' interface with receiver-side elements in order to facilitate, through interaction with such elements, the dynamic control of data processing or data flow at various points in the system. This interaction is typically occasional or intermittent in nature.

- processes, systems or elements thereof specially adapted to the generation, distribution and processing of data, which is either associated with video content, e.g. metadata, ratings, or related to the user or his environment and which has been actively or passively gathered. This data is either used to facilitate interaction or to alter or target the content.
2. In this main group, the first place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place.
 3. In this main group, the following terms and expressions are used with the meaning indicated:
 - additional data - designates still pictures, textual, graphical or executable data such as software. It is used to convey supplemental information and can be generated prior to or during the distribution process itself, e.g. metadata, keys.
 - content designates video or audio streams, which may be combined with additional data. Video data will always be present and occupy most of the downlink bandwidth in the distribution process
 - server - designates an apparatus designed for adapting the content received from the content provider to the distribution network. It also manages the distribution to client devices or intermediate components over a network. Further servers may also be present for gathering or generating additional data, e.g. rights management server
 - additional data server - designates a server, which sole purpose is the distribution or management of additional data. It is not in charge of the distribution of video or audio data
 - client - designates an apparatus such as a TV receiver, a set-top-box, a PC-TV, a mobile appliance (e.g. mobile phone or receiver in a vehicle), for receiving video, audio and possibly additional data from one or several servers or intermediate components via a network for further processing, storing or displaying. It can also transmit this data on a home-based local network to further devices, e.g. a home server transmitting video to PCs and set-top-boxes within a home.
 - local network - pertains to a restricted area, e.g. a home or a vehicle, and designates the link between a client and its peripheral devices
 - network - is to be distinguished from "local network": "network" designates the link between the server and the clients, or between the server and the intermediate components, or between the intermediate components and the clients, or between remotely located clients
 - distribution - encompasses broadcasting, multicasting and unicasting techniques for transmitting content from one or more sources to one or more receiving stations. The distribution follows a request by a receiving station to the source, e.g. VOD or from a customization of the content by the source, e.g. targeting advertisements to a demographic group in a unidirectional or bidirectional system. Additionally, distribution encompasses techniques where the client acts as a source and another client acts as a receiving station, e.g. a peer-to-peer system for sharing video among client devices
 - end-user - designates a physical person, e.g. a TV viewer, who consumes the content using the client device. He is the final recipient of the content distributed by the server
 - interaction - covers actions occurring between or among two or more objects that have an effect upon one another, wherein objects comprise users, system operators, system elements, or content. The user may interact with content locally at the client device, e.g. for requesting additional data stored within the client device. The user may interact with content remotely through a server e.g. for VOD playback control or for uploading video to a server. The client device may interact with the content e.g. selecting content based upon the user profile. The client device may interact with a server using a return channel, e.g. for authenticating client or

uploading client hardware capabilities. The server may interact with a client device, e.g. to force a client to tune to an advertisement channel
upstream - designates the direction of data flow towards the source, e.g. a server receiving a request via a mobile phone network.
downstream - designates the direction of data flow towards a client, e.g. a client receiving data originating from a server elementary stream
An elementary stream (ES) as defined by the MPEG system layer designates the output of an audio or video encoder.

- U H04N 21/20
 - Servers specifically adapted for the distribution of content, e.g. VOD servers; Operations thereof
- U H04N 21/21
 - • Server components or server architectures
- U H04N 21/222
 - • • Secondary servers, e.g. proxy server, cable television Head-end
{(intermediate processing or storage in data networks [H04L 29/08702](#))}
- D H04N 2021/225
 - • • • {~~local VOD servers~~}
<administratively transferred to [H04N 21/2225](#) INV>

Project: RP0142 (H04N)

- M H04N 21/40
 - Client devices specifically adapted for the reception of or interaction with content, e.g. set-top-box [STB]; Operations thereof ~~{(arrangements for distribution where lower stations, e.g. receivers, interact with the broadcast H04H 20/38; arrangements specially adapted for receiving broadcast information H04H 40/00)}~~
- U H04N 21/41
 - • Structure of client; Structure of client peripherals
- C H04N 21/4104
 - • • {~~using peripherals~~ *Peripherals* receiving signals from specially adapted client devices}

WARNING
*Group [H04N 21/4104](#) is impacted by reclassification into groups [H04N 21/411](#) and [H04N 21/4112](#).
All groups listed in this Warning should be considered in order to perform a complete search.*
- M H04N 21/4108
 - • • • {~~characterized~~ *characterised* by an identification number or address, e.g. local network address (protecting specific internal or external computer components ~~used for computing or processing information by creating or determining hardware identification~~ *using identification number* [G06F 21/73](#); addressing and naming in data networks [H04L 29/12009](#))}
- N ~~H04N 21/411~~
 - • • • {~~having similar hardware or software capabilities as the client device itself, e.g. a first STB connected to a second STB~~}

WARNING
*Group [H04N 21/411](#) is incomplete pending reclassification of documents from group [H04N 21/4104](#).
Groups [H04N 21/4104](#) and [H04N 21/411](#) should be considered in order to perform a complete search.*
- N ~~H04N 21/4112~~
 - • • • {~~having fewer capabilities than the client, e.g. thin client having less processing power or no tuning capabilities~~}

WARNING
*Group [H04N 21/4112](#) is incomplete pending reclassification of documents from group [H04N 21/4104](#).
Groups [H04N 21/4104](#) and [H04N 21/4112](#) should be considered in order to perform a complete search.*

- C H04N 21/4126 {~~portable device, e.g. remote control with a display, PDA, mobile phone~~ *The peripheral being portable, e.g. PDAs or mobile phones* ~~(constructional details of equipment or arrangements specially adapted for portable computer application G06F 1/1626)}~~

WARNING

Group [H04N 21/4126](#) is impacted by reclassification into group [H04N 21/41265](#).

Groups [H04N 21/4126](#) and [H04N 21/41265](#) should be considered in order to perform a complete search.

- N H04N 21/41265 {having a remote control device for bidirectional communication between the remote control device and client device (unidirectional remote control device [H04N 21/42204](#))}

WARNING

Group [H04N 21/41265](#) is incomplete pending reclassification of documents from group [H04N 21/4126](#).

Groups [H04N 21/4126](#) and [H04N 21/41265](#) should be considered in order to perform a complete search.

Project: RP0280 (H04N)

- U H04N 21/422 Input-only peripherals {, i.e. input devices connected to specially adapted client devices}, e.g. global positioning system [GPS] {(input devices also receiving signals from specially adapted client devices [H04N 21/4104](#))}

- T H04N 21/42204 {User interfaces specially adapted for controlling a client device through a remote control device; Remote control devices therefor (~~interaction techniques for graphical user interfaces in general, see G06F 3/048; computer pointing devices in general, see G06F 3/033; user interfaces for controlling a tuning device of a television receiver through a remote control H03J 9/00~~; constructive details of casings for the remote control device [H01H 9/0235](#); *user interfaces for controlling a tuning device of a television receiver through a remote control H03J 9/00*; remote control of peripheral devices connected to a television receiver through the remote control device of the television receiver [H04B 1/205](#); ~~remote control devices in general G08C~~)}

Project: RP0142 (H04N)

- U H04N 21/42206 {characterized by hardware details}
- D H04N 21/42207 {~~Interfaces providing bidirectional communication between remote control devices and client devices~~
<administratively transferred to [H04N 21/41265](#)>
- D H04N 21/42219 {~~Remote control device emulator integrated in a peripheral device~~
<administratively transferred to [H04N 21/41265](#)>

Project: RP0280 (H04N)

- T H04N 21/42224 {Touch pad or touch panel provided on the remote control (~~touch pads in general G06F 3/03547~~)}
- T H04N 21/426 {~~Characteristics of or~~ Internal components of the client ~~{(H04N 5/44 takes precedence); Characteristics thereof} (H04N 5/44 takes precedence)~~

Project: RP0142 (H04N)

- M H04N 21/43
- Processing of content or additional data, e.g. demultiplexing additional data from a digital video stream; Elementary client operations, e.g. monitoring of home network; ~~synchronizing~~ *synchronising* decoder's clock; Client middleware {(demultiplexing of data packets for data networks, e.g. RTP/UDP [H04L 29/06176](#))}
- M H04N 21/4302
- • {Content ~~synchronization~~ *synchronisation* processes, e.g. decoder ~~synchronization~~ *synchronisation*}
- M H04N 21/4305
- • • {~~Synchronizing~~ *Synchronising* client clock from received content stream, e.g. locking decoder clock with encoder clock, extraction of the PCR packets (arrangements for synchronising receiver with transmitter by comparing receiver clock with transmitter clock [H04L 7/0012](#); arrangements for synchronising receiver with transmitter wherein the receiver takes measures against momentary loss of synchronisation [H04L 7/0083](#))}
- C H04N 21/4307
- • • {~~Synchronizing display of multiple content streams~~ *Synchronising the rendering of multiple content streams or additional data on devices*, e.g. synchronisation of audio ~~and video output or enabling or disabling interactive icons for a given period of time on a mobile phone with the video output on the TV screen~~}
- WARNING**
Group [H04N 21/4307](#) is impacted by reclassification into groups [H04N 21/43072](#), [H04N 21/43074](#), [H04N 21/43076](#), [H04N 21/43078](#) and [H04N 21/43079](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N H04N 21/43072
- • • • {of multiple content streams on the same device}
- WARNING**
Group [H04N 21/43072](#) is incomplete pending reclassification of documents from group [H04N 21/4307](#). Groups [H04N 21/4307](#) and [H04N 21/43072](#) should be considered in order to perform a complete search.
- N H04N 21/43074
- • • • {of additional data with content streams on the same device, e.g. of EPG data or interactive icon with a TV program}
- WARNING**
Group [H04N 21/43074](#) is incomplete pending reclassification of documents from group [H04N 21/4307](#). Groups [H04N 21/4307](#) and [H04N 21/43074](#) should be considered in order to perform a complete search.
- N H04N 21/43076
- • • • {of the same content streams on multiple devices, e.g. when family members are watching the same movie on different devices}
- WARNING**
Group [H04N 21/43076](#) is incomplete pending reclassification of documents from group [H04N 21/4307](#). Groups [H04N 21/4307](#) and [H04N 21/43076](#) should be considered in order to perform a complete search.

- N H04N 21/43078 {for seamlessly watching content streams when changing device, e.g. when watching the same program sequentially on a TV and then on a tablet}
- WARNING
Group [H04N 21/43078](#) is incomplete pending reclassification of documents from group [H04N 21/4307](#).
Groups [H04N 21/4307](#) and [H04N 21/43078](#) should be considered in order to perform a complete search.
- N H04N 21/43079 {of additional data with content streams on multiple devices}
- WARNING
Group [H04N 21/43079](#) is incomplete pending reclassification of documents from group [H04N 21/4307](#).
Groups [H04N 21/4307](#) and [H04N 21/43079](#) should be considered in order to perform a complete search.
- M H04N 21/436 . . . Interfacing a local distribution network, e.g. communicating with another STB ~~or inside the home~~ *{or one or more peripheral devices} inside the home*; ~~Interfacing an external card to be used in combination with the client device (arrangements specially adapted plural spots in a confined site in broadcast systems H04H 20/63)}~~
- U H04N 21/4363 Adapting the video {or multiplex} stream to a specific local network, e.g. a IEEE 1394 or Bluetooth® network
- M H04N 21/43637 {involving a wireless protocol, e.g. Bluetooth ~~or wireless LAN~~, *RF or wireless LAN [IEEE 802.11]* (~~IEEE 802.11~~); arrangements for wireless networking or broadcasting of information in indoor or near-field type systems [H04B 10/114](#); ~~wireless local area data switching networks H04W~~; ~~flow control in wireless networks H04W 28/10~~}

Project: RP0280 (H04N)

- U H04N 21/438 Interfacing the downstream path of the transmission network originating from a server, e.g. retrieving MPEG packets from an IP network *{(transmission of MPEG streams over ATM [H04L 12/5601](#); processing of real-time packets [H04L 29/06176](#); flow control in data networks [H04L 47/10](#))}*
- M H04N 21/4383 {Accessing a communication channel; ~~e.g. channel tuning (tuning indicators; automatic tuning control H04N 5/50)~~}

Project: RP0142 (H04N)

- U H04N 21/442 Monitoring of processes or resources, e.g. detecting the failure of a recording device, monitoring the downstream bandwidth, the number of times a movie has been viewed, the storage space available from the internal hard disk *{(arrangements for monitoring broadcast services or broadcast-related services [H04H 60/29](#); arrangements for identifying or recognising characteristics with a direct linkage to broadcast information [H04H 60/35](#); monitoring of user activities for profile generation for accessing a video database [G06F 16/739](#); monitoring in wireless networks [H04W 24/00](#))}*
- U H04N 21/44213 {Monitoring of end-user related data (arrangements for monitoring the users' behaviour or opinions in broadcast systems [H04H 60/33](#))}

- C H04N 21/44222 {~~Monitoring Analytics~~ of user selections, e.g. selection of programs; ~~or purchase activity (monitoring of user selections in data processing systems G06F 11/34; monitoring of user activities for profile generation for accessing a video database G06F 16/739; tracking the activity of the end-user H04L 29/08675; arrangements for monitoring the user's behaviour or opinions in broadcast systems H04H 60/33)}~~
- WARNING
Group H04N 21/44222 is impacted by reclassification into groups H04N 21/44224 and H04N 21/44226.
Groups H04N 21/44222, H04N 21/44224 and H04N 21/44226 should be considered in order to perform a complete search.
- N H04N 21/44224 {Monitoring of user activity on external systems, e.g. Internet browsing}
- WARNING
Group H04N 21/44224 is incomplete pending reclassification of documents from group H04N 21/44222.
Groups H04N 21/44222 and H04N 21/44224 should be considered in order to perform a complete search.
- N H04N 21/44226 {on social networks}
- WARNING
Group H04N 21/44226 is incomplete pending reclassification of documents from group H04N 21/44222.
Groups H04N 21/44222 and H04N 21/44226 should be considered in order to perform a complete search.
- U H04N 21/45 . . . Management operations performed by the client for facilitating the reception of or the interaction with the content or administrating data related to the end-user or to the client device itself, e.g. learning user preferences for recommending movies, resolving scheduling conflicts
- C H04N 21/4508 . . . {Management of client data or end-user data}
- WARNING
Group H04N 21/4508 is impacted by reclassification into group H04N 21/4518.
Groups H04N 21/4508 and H04N 21/4518 should be considered in order to perform a complete search.
- M H04N 21/4516 {involving client characteristics, e.g. Set-Top-Box type, software version; ~~or amount of memory available (allocation of resources considering hardware capabilities G06F 9/5044; allocation of resources considering software capabilities G06F 9/5055; protocols involving terminal profiles for network applications in communication control or processing H04L 29/08927; message adaptation based on network or terminal capabilities in packet switching networks H04L 51/06; processing of terminal status or physical abilities in wireless networks H04W 8/22)}~~
- N H04N 21/4518 {involving characteristics of one or more peripherals, e.g. peripheral type, software version, amount of memory available or display capabilities}
- WARNING
Group H04N 21/4518 is incomplete pending reclassification of documents from group H04N 21/4508.
Groups H04N 21/4508 and H04N 21/4518 should be considered in order to perform a complete search.

Project: RP0280 (H04N)

- U H04N 21/458
 - • Scheduling content for creating a personalised stream, e.g. by combining a locally stored advertisement with an incoming stream; Updating operations, e.g. for OS modules {; time-related management operations (arrangements for replacing or switching information during the broadcast or during the distribution [H04H 20/10](#))}
- T H04N 21/4586
 - • • {Content update operation triggered locally, e.g. by comparing the version of software modules in a DVB carousel to the version stored locally (deployment, distribution, installation, update of software [G06F 8/65](#); ~~program updating while running in general G06F 8/656~~; error detection or correction of the data by redundancy during software upgrading [G06F 11/1433](#); arrangements for updating broadcast information or broadcast-related information [H04H 60/25](#))}
- T H04N 21/47
 - • End-user applications ~~{(services or applications for real-time multimedia communications H04L 29/06387)}~~

Project: RP0346 (H05K)

- U H05K 1/00 Printed circuits**
- U H05K 1/02
 - Details
- M H05K 1/0266
 - • {Marks, test patterns, ~~inspection means~~ or identification means}
- U H05K 1/09
 - • Use of materials for the {conductive, e.g. } metallic pattern
- U H05K 1/092
 - • • {Dispersed materials, e.g. conductive pastes or inks}
- M H05K 1/097
 - • • • {Inks comprising nanoparticles, ~~i.e. inks which are sinterable at low temperatures~~ and specially adapted for being sintered at low temperature ([H05K 1/095](#) takes precedence)}
- M H05K 1/18
 - Printed circuits structurally associated with non-printed electric components ([H05K 1/0201](#), [H05K 1/023](#), [H05K 1/0243](#), and [H05K 1/16](#) take precedence)
- M H05K 1/182
 - {associated with components mounted in the printed circuit board, e.g. ~~IMC (insert mounted components)~~ *insert mounted components [IMC]*}
- U H05K 3/00 Apparatus or processes for manufacturing printed circuits**
- U H05K 3/30
 - Assembling printed circuits with electric components, e.g. with resistor
- U H05K 3/32
 - • electrically connecting electric components or wires to printed circuits
- U H05K 3/34
 - • • by soldering
- U H05K 3/3457
 - • • • {Solder materials or compositions; Methods of application thereof}
- M H05K 3/3478
 - • • • • {Applying solder ~~paste, particles or~~ preforms; Transferring prefabricated solder patterns}
- D H05K 3/3484
 - • • • • • {Paste or slurry or powder (screen printing or stencil printing of solder paste [H05K 3/1216](#))}
 - <administratively transferred to [H05K 3/3485](#)>
- N H05K 3/3485
 - • • • • {Applying solder paste, slurry or powder (thick film methods for applying conductive paste or ink patterns [H05K 3/12](#))}
- M H05K 3/44
 - ~~Manufacture~~ *Manufacturing* insulated metal core circuits {or other insulated electrically conductive core circuits ([H05K 3/0058](#), [H05K 3/4641](#), [H05K 3/4608](#), and [H05K 3/4641](#) take precedence)}
- U H05K 3/46
 - Manufacturing multilayer circuits
- U H05K 3/4602
 - • {characterized by a special circuit board as base or central core whereon additional circuit layers are built or additional circuit boards are laminated}
- M H05K 3/4608
 - • • {comprising an electrically conductive *base or* core}

- U H05K 7/00** **Constructional details common to different types of electric apparatus (casings, cabinets, drawers [H05K 5/00](#))**
- U H05K 7/20 · Modifications to facilitate cooling, ventilating, or heating
 - U H05K 7/2039 · · {characterised by the heat transfer by conduction from the heat generating element to a dissipating body (arrangements for increasing/decreasing heat-transfer, e.g. fins details, [F28F 13/00](#))}
 - M H05K 7/205 · · · {~~Thermal paths through the~~*Heat-dissipating body thermally connected to heat generating element via thermal paths through* printed circuit board [PCB] (details of PCBs ~~related~~*relating* to heat transfer [H05K 1/0201](#))}
- U H05K 9/00** **Screening of apparatus or components against electric or magnetic fields (devices for absorbing radiation from an antenna [H01Q 17/00](#))**
- U H05K 9/0007 · {Casings (standardised racks [H05K 9/0062](#))}
 - U H05K 9/002 · · {with localised screening}
 - M H05K 9/0039 · · · {~~Ground layout on printed circuit board~~*Galvanic coupling of ground layer on printed circuit board [PCB] to conductive casing (printed shielding conductors, ground planes or power planes for reduction of cross-talk or noise in printed circuits [H05K 1/0218](#))*}
- U H05K 2201/00** **Indexing scheme relating to printed circuits covered by [H05K 1/00](#)**
- U H05K 2201/03 · Conductive materials
 - U H05K 2201/0332 · · Structure of the conductor
 - U H05K 2201/0388 · · · Other aspects of conductors
 - M H05K 2201/0394 · · · · Conductor crossing over a hole in the substrate *or a gap between two separate substrate parts*
 - U H05K 2201/09 · Shape and layout
 - C H05K 2201/09818 · · ~~Other shape and layout details not provided for in~~*Shape or layout details not covered by a single group of [H05K 2201/09009](#) - [H05K 2201/09209](#)[H05K 2201/09809](#); -Shape and layout details covering several of these groups*
 - U H05K 2201/09981 · · · Metallised walls
 - N H05K 2201/09985 · · · *Hollow waveguide combined with printed circuit*
 - U H05K 2201/10 · Details of components or other objects attached to or integrated in a printed circuit board
 - U H05K 2201/10007 · · Types of components
 - M H05K 2201/10098 · · · ~~Component~~*Components* for radio transmission, e.g. ~~Radio-Frequency Identification-Tag [RFID]~~*radio frequency identification [RFID] tag, printed or non-printed antennas*
- U H05K 2203/00** **Indexing scheme relating to apparatus or processes for manufacturing printed circuits covered by [H05K 3/00](#)**
- U H05K 2203/04 · Soldering or other types of metallurgic bonding (using molten metal [H05K 2203/128](#))
 - M H05K 2203/045 · · Solder ~~filled-PTH during processing~~*-filled plated through-hole [PTH] during processing wherein the solder is removed from the PTH after processing*(~~solder filled plated through-hole in the final product [H05K 2201/09572](#)~~)

Project: RP0678 (Y02A)

- T Y02A 10/00 **at coastal zones; at river basins**
- T Y02A 10/11 · Hard structures, *e.g. dams, dykes or breakwaters*

- D Y02A 10/12
- Reservoirs; Polders
<administratively transferred to [Y02A 10/11](#) ADD>
- D Y02A 10/13
- Dykes; Dams
<administratively transferred to [Y02A 10/11](#) ADD>
- D Y02A 10/14
- Sea-walls, surge or tidal barriers
<administratively transferred to [Y02A 10/11](#) ADD>
- D Y02A 10/15
- Self-contained breakwaters
<administratively transferred to [Y02A 10/11](#) ADD>
- D Y02A 10/16
- Revetments of the shore
<administratively transferred to [Y02A 10/11](#) ADD>
- D Y02A 10/17
- Groynes
<administratively transferred to [Y02A 10/11](#) ADD>
- D Y02A 10/18
- Jetties or landing bridges
<administratively transferred to [Y02A 10/11](#) ADD>
- D Y02A 10/20
- Soft structures
<administratively transferred to [Y02A 10/00](#) ADD>
- D Y02A 10/21
- Land claim or beach nourishment
<administratively transferred to [Y02A 10/00](#) ADD>
- D Y02A 10/22
- Wetland restoration or creation
<administratively transferred to [Y02A 10/00](#) ADD>
- T Y02A 10/23
- Dune restoration or creation; *Cliff stabilisation*
- D Y02A 10/24
- Cliff stabilization
<administratively transferred to [Y02A 10/23](#) ADD>
- D Y02A 10/25
- Artificial seaweed
<administratively transferred to [Y02A 10/26](#) ADD>
- T Y02A 10/26
- Artificial reefs *or seaweed; Restoration or protection of coral reefs*
- D Y02A 10/27
- Restoration or protection of coral reefs
<administratively transferred to [Y02A 10/26](#) ADD>
- D Y02A 10/28
- Sediment management
<administratively transferred to [Y02A 10/00](#) ADD>
- T Y02A 10/30
- Flood prevention; Flood *management or accommodation or storm water management, e.g. using flood barriers; Storm water management*
- D Y02A 10/31
- Permanently installed flood barriers
<administratively transferred to [Y02A 10/30](#) ADD>
- D Y02A 10/32
- Temporarily installed flood barriers
<administratively transferred to [Y02A 10/30](#) ADD>
- D Y02A 10/33
- Infiltration of water into the ground
<administratively transferred to [Y02A 10/30](#) ADD>
- D Y02A 10/34
- Flood-proof sanitary latrines
<administratively transferred to [Y02A 10/30](#) ADD>
- D Y02A 10/35
- Revetments for protection of river banks or dykes
<administratively transferred to [Y02A 10/30](#) ADD>

- D Y02A 10/36
 - • Equalizing tanks in the sewage system for regulating the run-off
<administratively transferred to [Y02A 10/30](#) ADD>
- D Y02A 10/37
 - • Bioswales
<administratively transferred to [Y02A 10/30](#) ADD>
- D Y02A 10/38
 - • Changing the natural surface of ground to re-route water
<administratively transferred to [Y02A 10/30](#) ADD>
- D Y02A 10/383
 - • • Weirs
<administratively transferred to [Y02A 10/30](#) ADD>
- D Y02A 10/386
 - • • Locks
<administratively transferred to [Y02A 10/30](#) ADD>
- D Y02A 10/39
 - • Evacuation systems
<administratively transferred to [Y02A 10/30](#) ADD>
- D Y02A 10/395
 - • Curb floodplain development for flood management
<administratively transferred to [Y02A 10/30](#) ADD>
- T Y02A 10/40
 - **Monitoring** *Controlling or monitoring, e.g. of flood or hurricane*; Forecasting, *e.g. risk assessment or mapping*; **Planning**
- D Y02A 10/41
 - • of coastal areas
<administratively transferred to [Y02A 10/40](#) ADD>
- D Y02A 10/42
 - • Real-time flood forecasting
<administratively transferred to [Y02A 10/40](#) ADD>
- D Y02A 10/44
 - • Disaster preparedness plans
<administratively transferred to [Y02A 10/40](#) ADD>
- D Y02A 10/46
 - • Computerized flood control, risk assessment or mapping
<administratively transferred to [Y02A 10/40](#) ADD>
- D Y02A 10/48
 - • Hazard insurance
<administratively transferred to [Y02A 10/40](#) ADD>
- T Y02A 20/00** **Water conservation; Efficient water supply; Efficient water use**
- D Y02A 20/10
 - Relating to general water supply, e.g. municipal or domestic water supply
<administratively transferred to [Y02A 20/00](#) ADD>
- D Y02A 20/102
 - • Tanks
<administratively transferred to [Y02A 20/00](#) ADD>
- D Y02A 20/104
 - • • for municipal applications
<administratively transferred to [Y02A 20/00](#) ADD>
- D Y02A 20/106
 - • • for domestic applications
<administratively transferred to [Y02A 20/00](#) ADD>
- M Y02A 20/108
 - • Rainwater harvesting
- D Y02A 20/109
 - • Obtaining drinking water from air humidity
<administratively transferred to [Y02A 20/00](#) ADD>
- D Y02A 20/112
 - • Obtaining drinking water from open water
<administratively transferred to [Y02A 20/00](#) ADD>
- D Y02A 20/114
 - • Water wells
<administratively transferred to [Y02A 20/00](#) ADD>

- D Y02A 20/116
 - • • Vertical well filter pipes
 - <administratively transferred to [Y02A 20/00](#) ADD>
- D Y02A 20/118
 - • • Borehole wells
 - <administratively transferred to [Y02A 20/00](#) ADD>
- D Y02A 20/119
 - • • having horizontal or inclined filter pipes
 - <administratively transferred to [Y02A 20/00](#) ADD>
- D Y02A 20/12
 - • Multipurpose dams or barriers
 - <administratively transferred to [Y02A 20/00](#) ADD>
- T Y02A 20/124
 - • Water desalination
- D Y02A 20/126
 - • • characterized by the method
 - <administratively transferred to [Y02A 20/124](#) ADD>
- D Y02A 20/128
 - • • • Evaporation methods, e.g. distillation
 - <administratively transferred to [Y02A 20/124](#) ADD>
- D Y02A 20/129
 - • • • • using solar energy
 - <administratively transferred to [Y02A 20/142](#) ADD>
- M Y02A 20/131
 - • ~~Reverse-osmosis~~
- D Y02A 20/132
 - • • • Freezing
 - <administratively transferred to [Y02A 20/124](#) ADD>
- D Y02A 20/134
 - • • • Electrolysis
 - <administratively transferred to [Y02A 20/124](#) ADD>
- M Y02A 20/138
 - • • ~~powered by a renewable energy source~~ *using renewable energy*
- M Y02A 20/141
 - • • • ~~the source being wind~~ *Wind* power
- T Y02A 20/142
 - • • • ~~the source being solar thermal or photovoltaics~~ *Solar thermal; Photovoltaics*
- M Y02A 20/144
 - • • • ~~the source being wave~~ *Wave* energy
- M Y02A 20/146
 - • ~~Use of~~ *using* grey water
- M Y02A 20/148
 - • • using household water from wash basins or showers
- M Y02A 20/15
 - • Leakage reduction or detection in water storage or distribution
- T Y02A 20/152
 - • Water filtration
- D Y02A 20/154
 - • • of domestic water
 - <administratively transferred to [Y02A 20/152](#) ADD>
- D Y02A 20/156
 - • • of municipal or industrial water
 - <administratively transferred to [Y02A 20/152](#) ADD>
- D Y02A 20/16
 - • Water quality or standards enforcement
 - <administratively transferred to [Y02A 20/152](#) ADD>
- D Y02A 20/18
 - • Solar- or wind-powered water pumping
 - <administratively transferred to [Y02A 20/00](#) ADD>
- T Y02A 20/20
 - • ~~Water pollution control technologies~~ *Controlling water pollution; Waste water treatment*
- D Y02A 20/202
 - • • for households
 - <administratively transferred to [Y02A 20/20](#) ADD>
- M Y02A 20/204
 - • • Keeping clear the surface of open water from oil spills
- D Y02A 20/206
 - • • Monitoring water for contaminating materials
 - <administratively transferred to [Y02A 20/20](#) ADD>

- T Y02A 20/208
 - • Off-grid powered water treatment
- U Y02A 20/211
 - • • Solar-powered water purification
- U Y02A 20/212
 - • • Solar-powered wastewater sewage treatment, e.g. spray evaporation
- D Y02A 20/214
 - • • Water treatment at point-of-use for potable water

<administratively transferred to [Y02A 20/208](#) ADD>
- D Y02A 20/216
 - • • Wastewater treatment tanks

<administratively transferred to [Y02A 20/208](#) ADD>
- D Y02A 20/218
 - • Water metering with adaptation potential, e.g. aiming at water saving, leakage detection or avoidance, fraud or theft detection

<administratively transferred to [Y02A 20/00](#) ADD>
- D Y02A 20/22
 - • Pricing strategies aiming to limit water consumption or spillage, e.g. progressive pricing, fraud detection or fostering water saving

<administratively transferred to [Y02A 20/00](#) ADD>
- T Y02A 20/30
 - Relating to industrial water supply, e.g. used for cooling
- D Y02A 20/302
 - • Use of lower-grade water

<administratively transferred to [Y02A 20/30](#) ADD>
- D Y02A 20/304
 - • Recirculation

<administratively transferred to [Y02A 20/30](#) ADD>
- T Y02A 20/40
 - ~~Water resources protection or enhancement~~ **Protecting water resources**
- U Y02A 20/402
 - • River restoration
- U Y02A 20/404
 - • Saltwater intrusion barriers
- U Y02A 20/406
 - • Aquifer recharge
- D Y02A 20/408
 - • Draining or infiltration of impermeable surfaces for groundwater enrichment

<administratively transferred to [Y02A 20/40](#) ADD>
- U Y02A 20/411
 - • Water saving techniques at user level
- D Y02A 20/412
 - • • Reducing amount of water used by toilet flushing

<administratively transferred to [Y02A 20/40](#) ADD>
- D Y02A 20/414
 - • • Water-saving for showers or bath tubs

<administratively transferred to [Y02A 20/40](#) ADD>
- T Y02A 30/00 Adapting or protecting infrastructure or their operation**
- D Y02A 30/10
 - in energy generation or distribution

<administratively transferred to [Y02A 30/00](#) ADD>
- D Y02A 30/12
 - • Weather forecasting for energy supply management

<administratively transferred to [Y02A 30/00](#) ADD>
- T Y02A 30/14
 - • Extreme weather resilient electric power supply **systemsystems**, e.g. strengthening power lines or underground power cables
- D Y02A 30/16
 - • Flood-resilient electric equipment

<administratively transferred to [Y02A 30/14](#) ADD>
- D Y02A 30/17
 - • • Generators

<administratively transferred to [Y02A 30/14](#) ADD>
- D Y02A 30/18
 - • • Uninterruptible power supply [UPS] systems; Backup generators

<administratively transferred to [Y02A 30/14](#) ADD>
- D Y02A 30/19
 - • • Cabinets or switch boards

<administratively transferred to [Y02A 30/14](#) ADD>

- D Y02A 30/20
 - in-buildings, dwellings or related infrastructures
 - <administratively transferred to [Y02A 30/00](#) ADD>
- D Y02A 30/21
 - • Floating houses
 - <administratively transferred to [Y02A 30/00](#) ADD>
- D Y02A 30/22
 - • Rotary buildings
 - <administratively transferred to [Y02A 30/00](#) ADD>
- D Y02A 30/23
 - • Elevated buildings
 - <administratively transferred to [Y02A 30/00](#) ADD>
- T Y02A 30/24
 - • Structural elements or technologies for improving thermal insulation
- D Y02A 30/241
 - • • Thermal insulation technologies with adaptation potential
 - <administratively transferred to [Y02A 30/24](#) ADD>
- M Y02A 30/242
 - • → Slab shaped vacuum insulation
- D Y02A 30/243
 - • • Slab shaped aerogel insulation
 - <administratively transferred to [Y02A 30/24](#) ADD>
- T Y02A 30/244
 - • → characterized by the use of locally available building materials using natural or recycled building materials, e.g. straw, wool, clay or used tires
- D Y02A 30/245
 - • • • of vegetal origin, e.g. thatching or straw
 - <administratively transferred to [Y02A 30/244](#) ADD>
- D Y02A 30/246
 - • • • of animal origin, e.g. wool or feathers
 - <administratively transferred to [Y02A 30/244](#) ADD>
- D Y02A 30/247
 - • • • using indigenous Earth materials, e.g. clay or stone
 - <administratively transferred to [Y02A 30/244](#) ADD>
- D Y02A 30/248
 - • • • Recycled materials, e.g. made of used tires, bumpers or newspapers
 - <administratively transferred to [Y02A 30/244](#) ADD>
- T Y02A 30/249
 - • • Glazing, e.g. vacuum glazing
- D Y02A 30/25
 - • • • Vacuum glazing
 - <administratively transferred to [Y02A 30/249](#) ADD>
- D Y02A 30/251
 - • • • Aerogel glazing systems
 - <administratively transferred to [Y02A 30/249](#) ADD>
- D Y02A 30/252
 - • • Wooden or plastic window or door frames with extra insulation
 - <administratively transferred to [Y02A 30/24](#) ADD>
- D Y02A 30/253
 - • • Roofs with adaptation potential
 - <administratively transferred to [Y02A 30/24](#) ADD>
- T Y02A 30/254
 - • → Roof garden systems; Roof coverings with high solar reflectance
- D Y02A 30/255
 - • • • Roof coverings with high solar reflectance
 - <administratively transferred to [Y02A 30/254](#) ADD>
- D Y02A 30/256
 - • • Floors specially adapted for storing heat or cold
 - <administratively transferred to [Y02A 30/24](#) ADD>
- D Y02A 30/257
 - • • Light dependent control systems for sun shading
 - <administratively transferred to [Y02A 30/24](#) ADD>
- D Y02A 30/259
 - • Passive climatisation
 - <administratively transferred to [Y02A 30/00](#) ADD>

- D Y02A 30/26
- • • using air flow into the conditioned premises or facilities
<administratively transferred to [Y02A 30/00](#) ADD>
- D Y02A 30/261
- • • by improving the thermodynamic properties of the premises or facilities
<administratively transferred to [Y02A 30/00](#) ADD>
- T Y02A 30/27
- • Relating to heating, ventilation or air conditioning [HVAC] technologies
- M Y02A 30/272
- • • using solar thermal energy *Solar heating or cooling*
- M Y02A 30/274
- • • using waste energy, e.g. from internal combustion engine
- D Y02A 30/276
- • • of the sorption type
<administratively transferred to [Y02A 30/27](#) ADD>
- D Y02A 30/277
- • • • Absorption-based systems
<administratively transferred to [Y02A 30/27](#) ADD>
- D Y02A 30/278
- • • • Adsorption-based systems
<administratively transferred to [Y02A 30/27](#) ADD>
- T Y02A 30/30
- in transportation, *e.g. on roads, waterways or railways*
- D Y02A 30/31
- • Relating to road transportation
<administratively transferred to [Y02A 30/30](#) ADD>
- D Y02A 30/32
- • • Permeable parking lots
<administratively transferred to [Y02A 30/30](#) ADD>
- D Y02A 30/33
- • • Ground surface material
<administratively transferred to [Y02A 30/30](#) ADD>
- D Y02A 30/333
- • • • Warm-mix asphalt
<administratively transferred to [Y02A 30/30](#) ADD>
- D Y02A 30/336
- • • • Engineered cementitious composite [ECC]
<administratively transferred to [Y02A 30/30](#) ADD>
- D Y02A 30/34
- • Relating to waterways transportation
<administratively transferred to [Y02A 30/30](#) ADD>
- D Y02A 30/35
- • • Storm-resilient vessels
<administratively transferred to [Y02A 30/30](#) ADD>
- D Y02A 30/36
- • • Active motion-dampening systems for ports
<administratively transferred to [Y02A 30/30](#) ADD>
- D Y02A 30/38
- • Relating to railways transportation
<administratively transferred to [Y02A 30/30](#) ADD>
- D Y02A 30/40
- Relating to water supply or wastewater treatment
<administratively transferred to [Y02A 20/20](#) ADD>
- D Y02A 30/45
- • Specially adapted pumping equipment e.g. for flood draining
<administratively transferred to [Y02A 20/20](#) ADD>
- D Y02A 30/50
- Resilient IT infrastructure
<administratively transferred to [Y02A 30/00](#) ADD>
- T Y02A 30/60
- Planning or developing urban green infrastructure
- D Y02A 30/62
- • Integration of district energy or distributed or on-site energy generation, e.g. combined heat and power generation or solar energy, in city layout
<administratively transferred to [Y02A 30/60](#) ADD>

- D Y02A 30/64
- • for reducing heat island effects, e.g. by minimizing paved surfaces or by planting trees
 - <administratively transferred to [Y02A 30/60](#) ADD>
- D Y02A 30/68
- • Sloping ground terrains in public areas
 - <administratively transferred to [Y02A 30/60](#) ADD>
- U Y02A 40/00** **Adaptation technologies in agriculture, forestry, livestock or agroalimentary production**
- T Y02A 40/10
- in agriculture
- D Y02A 40/11
- • Specially adapted for crops
 - <administratively transferred to [Y02A 40/10](#) ADD>
- D Y02A 40/12
- • • Precision agriculture
 - <administratively transferred to [Y02A 40/10](#) ADD>
- M Y02A 40/13
- • ▾ Abiotic stress
- M Y02A 40/132
- • • ▾ Plants tolerant to drought
- M Y02A 40/135
- • • ▾ Plants tolerant to salinity
- M Y02A 40/138
- • • ▾ Plants tolerant to heat
- D Y02A 40/14
- • • with increased yield
 - <administratively transferred to [Y02A 40/10](#) ADD>
- D Y02A 40/143
- • • • using agrochemicals
 - <administratively transferred to [Y02A 40/10](#) ADD>
- T Y02A 40/146
- • → **Transgenic plants** *Genetically Modified [GMO] plants, e.g. transgenic plants*
- D Y02A 40/15
- • • Fungal symbiosis
 - <administratively transferred to [Y02A 40/10](#) ADD>
- D Y02A 40/16
- • • Pest or insect control
 - <administratively transferred to [Y02A 40/10](#) ADD>
- D Y02A 40/162
- • • • Genetically modified [GMO] plants resistant to insects
 - <administratively transferred to [Y02A 40/146](#) ADD>
- D Y02A 40/164
- • • • Genetically modified [GMO] plants resistant to nematodes
 - <administratively transferred to [Y02A 40/146](#) ADD>
- D Y02A 40/166
- • • • Ecological pest control, i.e. using competitors or parasites against crop pests
 - <administratively transferred to [Y02A 40/146](#) ADD>
- D Y02A 40/168
- • • • Rainguards for rubber trees
 - <administratively transferred to [Y02A 40/10](#) ADD>
- D Y02A 40/17
- • • Aeroponics seed potato production
 - <administratively transferred to [Y02A 40/10](#) ADD>
- D Y02A 40/18
- • • Related to fertilizer management
 - <administratively transferred to [Y02A 40/10](#) ADD>
- D Y02A 40/19
- • • • Integrated nutrient management, e.g. appropriate fertilizer use
 - <administratively transferred to [Y02A 40/10](#) ADD>
- T Y02A 40/20
- • → **Sustainable fertilizers of biological origin** *Fertilizers of biological origin, e.g. guano or fertilizers made from animal corpses*

- D Y02A 40/201 Fertilizers made from animal corpses or parts thereof
<administratively transferred to [Y02A 40/20](#) ADD>
- D Y02A 40/202 from fish or from fish-wastes
<administratively transferred to [Y02A 40/20](#) ADD>
- D Y02A 40/203 from meat-wastes or from other wastes of animal origin, e.g. skins, hair, hoofs, feathers, blood
<administratively transferred to [Y02A 40/20](#) ADD>
- D Y02A 40/204 Apparatus for their manufacture
<administratively transferred to [Y02A 40/20](#) ADD>
- D Y02A 40/205 Fertilizers from human or animal excrements, e.g. manure
<administratively transferred to [Y02A 40/20](#) ADD>
- D Y02A 40/206 Guano
<administratively transferred to [Y02A 40/20](#) ADD>
- D Y02A 40/207 from human fecal masses
<administratively transferred to [Y02A 40/20](#) ADD>
- D Y02A 40/208 Apparatus for the manufacture
<administratively transferred to [Y02A 40/20](#) ADD>
- D Y02A 40/209 Fertilizers made from waste originating from industrial processing of raw material of agricultural origin or derived products thereof
<administratively transferred to [Y02A 40/20](#) ADD>
- D Y02A 40/21 Solid waste from mechanical processing of material, e.g. seed coats, olive pits, almond shells, fruit residue, rice hulls
<administratively transferred to [Y02A 40/20](#) ADD>
- D Y02A 40/211 Waste from chemical processing of material, e.g. distillation, roasting, cooking
<administratively transferred to [Y02A 40/20](#) ADD>
- D Y02A 40/212 Waste from biochemical processing of material, e.g. fermentation, breweries
<administratively transferred to [Y02A 40/20](#) ADD>
- D Y02A 40/213 Fertilizers from waste water, sewage sludge, sea slime, ooze or similar masses
<administratively transferred to [Y02A 40/20](#) ADD>
- D Y02A 40/214 Fertilizers from household or town refuse
<administratively transferred to [Y02A 40/20](#) ADD>
- D Y02A 40/215 Apparatus for the manufacture
<administratively transferred to [Y02A 40/20](#) ADD>
- D Y02A 40/216 Biological compost
<administratively transferred to [Y02A 40/20](#) ADD>
- T Y02A 40/22 . . Improving land use; Improving water use or availability; Controlling erosion
- D Y02A 40/221 . . . Change land topography to improve water uptake or to reduce wind erosion
<administratively transferred to [Y02A 40/22](#) ADD>
- D Y02A 40/222 by subdividing large fields
<administratively transferred to [Y02A 40/22](#) ADD>

- D Y02A 40/223 Grass waterways maintenance
<administratively transferred to [Y02A 40/22](#) ADD>
- D Y02A 40/224 by roughening land surface
<administratively transferred to [Y02A 40/22](#) ADD>
- D Y02A 40/225 Windbreaks
<administratively transferred to [Y02A 40/22](#) ADD>
- D Y02A 40/226 . . . Floating agriculture
<administratively transferred to [Y02A 40/22](#) ADD>
- D Y02A 40/227 . . . Control of sand encroachment
<administratively transferred to [Y02A 40/22](#) ADD>
- D Y02A 40/228 . . . Wetland restoration or protection
<administratively transferred to [Y02A 40/22](#) ADD>
- D Y02A 40/229 . . . Biochar technologies
<administratively transferred to [Y02A 40/22](#) ADD>
- D Y02A 40/23 . . . Improving water use or availability; Controlling erosion
<administratively transferred to [Y02A 40/22](#) ADD>
- D Y02A 40/231 in rain-fed agriculture
<administratively transferred to [Y02A 40/22](#) ADD>
- D Y02A 40/232 Soil conservation
<administratively transferred to [Y02A 40/22](#) ADD>
- D Y02A 40/233 Methods for working soils
<administratively transferred to [Y02A 40/22](#) ADD>
- D Y02A 40/234 Moss gardening
<administratively transferred to [Y02A 40/22](#) ADD>
- D Y02A 40/235 in irrigated agriculture
<administratively transferred to [Y02A 40/22](#) ADD>
- D Y02A 40/236 Tillage conservation
<administratively transferred to [Y02A 40/22](#) ADD>
- D Y02A 40/237 Efficient irrigation techniques, e.g. drip irrigation, sprinkler or spray irrigation
<administratively transferred to [Y02A 40/22](#) ADD>
- D Y02A 40/238 Irrigation information systems
<administratively transferred to [Y02A 40/22](#) ADD>
- D Y02A 40/239 Lining of canals with plastic films
<administratively transferred to [Y02A 40/22](#) ADD>
- D Y02A 40/24 Concentrate irrigation in periods of peak growth
<administratively transferred to [Y02A 40/22](#) ADD>
- D Y02A 40/241 using brackish water
<administratively transferred to [Y02A 40/22](#) ADD>
- D Y02A 40/242 . . . Limiting land conversion or deforestation
<administratively transferred to [Y02A 40/22](#) ADD>
- D Y02A 40/243 . . . Afforestation or reforestation
<administratively transferred to [Y02A 40/22](#) ADD>

- T Y02A 40/25 . . Greenhouse technology, *e.g. cooling systems therefor*
- D Y02A 40/252 . . . Constructional details of greenhouses
<administratively transferred to [Y02A 40/25](#) ADD>
- D Y02A 40/254 Dismountable or portable greenhouses; Greenhouses with sliding roofs
<administratively transferred to [Y02A 40/25](#) ADD>
- D Y02A 40/256 . . . Lighting systems for greenhouses
<administratively transferred to [Y02A 40/25](#) ADD>
- D Y02A 40/258 . . . Shading devices for greenhouses
<administratively transferred to [Y02A 40/25](#) ADD>
- D Y02A 40/26 Lamellar or like blinds
<administratively transferred to [Y02A 40/25](#) ADD>
- D Y02A 40/262 Inflatable structures
<administratively transferred to [Y02A 40/25](#) ADD>
- D Y02A 40/264 . . . Devices or systems for heating, ventilating, regulating temperature, or watering
<administratively transferred to [Y02A 40/25](#) ADD>
- D Y02A 40/266 Collecting solar energy
<administratively transferred to [Y02A 40/25](#) ADD>
- D Y02A 40/268 Air-conditioning systems
<administratively transferred to [Y02A 40/25](#) ADD>
- D Y02A 40/27 Watering arrangements
<administratively transferred to [Y02A 40/25](#) ADD>
- D Y02A 40/272 Efficient watering
<administratively transferred to [Y02A 40/25](#) ADD>
- D Y02A 40/274 Electric devices
<administratively transferred to [Y02A 40/25](#) ADD>
- T Y02A 40/28 . . specially adapted for farming
- D Y02A 40/282 . . . Changing farming practices to conserve soil moisture or nutrients; Reduce run-off or control soil erosion
<administratively transferred to [Y02A 40/28](#) ADD>
- D Y02A 40/284 Mulch stubble or straw
<administratively transferred to [Y02A 40/28](#) ADD>
- D Y02A 40/286 Crops rotation
<administratively transferred to [Y02A 40/28](#) ADD>
- D Y02A 40/288 Avoiding mono-cropping; Crop diversification
<administratively transferred to [Y02A 40/28](#) ADD>
- D Y02A 40/29 using lower planting densities
<administratively transferred to [Y02A 40/28](#) ADD>
- D Y02A 40/292 Terracing
<administratively transferred to [Y02A 40/28](#) ADD>
- D Y02A 40/294 Agro-forestry, silviculture or mixed farming solutions
<administratively transferred to [Y02A 40/28](#) ADD>

- D Y02A 40/296
- • • Bushfire prevention; Prescribed fire, i.e. controlled burning to reduce fuel buildup
 - <administratively transferred to [Y02A 40/28](#) ADD>
- D Y02A 40/298
- • • Forest fire control
 - <administratively transferred to [Y02A 40/28](#) ADD>
- D Y02A 40/30
- • • Timing of farming operations
 - <administratively transferred to [Y02A 40/28](#) ADD>
- D Y02A 40/302
- • • Advance sowing dates to offset moisture stress during warm periods
 - <administratively transferred to [Y02A 40/28](#) ADD>
- D Y02A 40/40
- • Management of saline soils
 - <administratively transferred to [Y02A 40/10](#) ADD>
- D Y02A 40/50
- • Evapotranspiration
 - <administratively transferred to [Y02A 40/10](#) ADD>
- T Y02A 40/51
- • specially adapted for storing agricultural or horticultural products
- D Y02A 40/52
- • • Racks for drying purposes
 - <administratively transferred to [Y02A 40/51](#) ADD>
- D Y02A 40/53
- • • Natural, e.g. solar drying
 - <administratively transferred to [Y02A 40/51](#) ADD>
- D Y02A 40/55
- • • Silos for storing seeds or grain
 - <administratively transferred to [Y02A 40/51](#) ADD>
- D Y02A 40/57
- • • Off-grid powered storage
 - <administratively transferred to [Y02A 40/51](#) ADD>
- M Y02A 40/58
- • • using renewable energies
- U Y02A 40/60
- Ecological corridors or buffer zones
- T Y02A 40/70
- in livestock or poultry
- D Y02A 40/72
- • Climate tolerant animal varieties, e.g. selective breeding
 - <administratively transferred to [Y02A 40/70](#) ADD>
- D Y02A 40/73
- • • Providing additional fodder for cattle during the dry season, e.g. by using fodder banks
 - <administratively transferred to [Y02A 40/70](#) ADD>
- D Y02A 40/74
- • • Optimising pasture management
 - <administratively transferred to [Y02A 40/70](#) ADD>
- D Y02A 40/75
- • Environmental control in livestock or poultry housing, e.g. of temperature or humidity
 - <administratively transferred to [Y02A 40/70](#) ADD>
- M Y02A 40/76
- • using renewable energy
- D Y02A 40/78
- • Livestock or poultry disease management, wherein the disease is affected by climate change
 - <administratively transferred to [Y02A 40/70](#) ADD>
- T Y02A 40/80
- in fisheries management
- T Y02A 40/81
- • Aquaculture, i.e. culture of aquatic animals e.g. of fish
- D Y02A 40/812
- • • of fish
 - <administratively transferred to [Y02A 40/81](#) ADD>

- D Y02A 40/814 Prevention or treatment of fish diseases
<administratively transferred to [Y02A 40/81](#) ADD>
- D Y02A 40/816 Hatching, e.g. incubators
<administratively transferred to [Y02A 40/81](#) ADD>
- M Y02A 40/818 Alternative feeds for fish *aquaculture, e.g. in aquacultures*
- D Y02A 40/82 of shellfish
<administratively transferred to [Y02A 40/81](#) ADD>
- D Y02A 40/822 of bivalves, e.g. oysters or mussels
<administratively transferred to [Y02A 40/81](#) ADD>
- D Y02A 40/824 of crustaceans, e.g. lobsters or shrimps
<administratively transferred to [Y02A 40/81](#) ADD>
- D Y02A 40/826 Floating cultivation devices, e.g. rafts or floating fish-farms
<administratively transferred to [Y02A 40/81](#) ADD>
- D Y02A 40/828 Connecting or mooring devices therefor
<administratively transferred to [Y02A 40/81](#) ADD>
- D Y02A 40/83 Artificial fishing banks or reefs
<administratively transferred to [Y02A 40/81](#) ADD>
- D Y02A 40/832 made of tyres
<administratively transferred to [Y02A 40/81](#) ADD>
- D Y02A 40/834 assembled of components
<administratively transferred to [Y02A 40/81](#) ADD>
- D Y02A 40/836 floating
<administratively transferred to [Y02A 40/81](#) ADD>
- D Y02A 40/838 of monolithic form, e.g. blocks
<administratively transferred to [Y02A 40/81](#) ADD>
- D Y02A 40/84 Arrangements for sinking or mooring thereof
<administratively transferred to [Y02A 40/81](#) ADD>
- D Y02A 40/845 Feeding devices
<administratively transferred to [Y02A 40/81](#) ADD>
- D Y02A 40/86 Information Technologies [IT] supporting fishing
<administratively transferred to [Y02A 40/80](#) ADD>
- D Y02A 40/88 Seaweed farming; Management of sea grass beds
<administratively transferred to [Y02A 40/80](#) ADD>
- T Y02A 40/90 in food processing or handling, *e.g. food conservation*
- D Y02A 40/92 in food processing
<administratively transferred to [Y02A 40/90](#) ADD>
- D Y02A 40/922 Technologies for reducing water consumption
<administratively transferred to [Y02A 40/90](#) ADD>
- M Y02A 40/924 using renewable energies
- M Y02A 40/926 Cooking stoves or furnaces using solar heat
- M Y02A 40/928 Cooking stoves using biomass
- D Y02A 40/94 relating to food conservation
<administratively transferred to [Y02A 40/90](#) ADD>

- D Y02A 40/941 . . . using natural products
<administratively transferred to [Y02A 40/90](#) ADD>
- D Y02A 40/942 using natural sugars
<administratively transferred to [Y02A 40/90](#) ADD>
- D Y02A 40/943 using natural acids, e.g. vinegar, citric
<administratively transferred to [Y02A 40/90](#) ADD>
- D Y02A 40/944 using vegetal oils
<administratively transferred to [Y02A 40/90](#) ADD>
- D Y02A 40/945 Salt based conservation
<administratively transferred to [Y02A 40/90](#) ADD>
- D Y02A 40/946 using brine
<administratively transferred to [Y02A 40/90](#) ADD>
- D Y02A 40/947 . . . Off-grid thermal processing
<administratively transferred to [Y02A 40/90](#) ADD>
- D Y02A 40/948 Sun-drying
<administratively transferred to [Y02A 40/90](#) ADD>
- D Y02A 40/949 Food-smoking
<administratively transferred to [Y02A 40/90](#) ADD>
- D Y02A 40/95 of edible seeds
<administratively transferred to [Y02A 40/90](#) ADD>
- D Y02A 40/96 . . relating to food management or storing
<administratively transferred to [Y02A 40/90](#) ADD>
- D Y02A 40/961 . . . Biopackaging, e.g. packaging containers made from renewable materials, bioplastics or biodegradable materials
<administratively transferred to [Y02A 40/90](#) ADD>
- D Y02A 40/962 . . . Wood-Barrels
<administratively transferred to [Y02A 40/90](#) ADD>
- T Y02A 40/963 . . . Off-grid food refrigeration
- D Y02A 40/964 Devices using naturally cold air or forced air convection
<administratively transferred to [Y02A 40/963](#) ADD>
- D Y02A 40/965 Devices using heat pumps
<administratively transferred to [Y02A 40/963](#) ADD>
- M Y02A 40/966 Powered by renewable energy sources
- D Y02A 40/967 using waste heat, e.g. from an internal combustion engine
<administratively transferred to [Y02A 40/963](#) ADD>
- D Y02A 40/968 using ice
<administratively transferred to [Y02A 40/963](#) ADD>
- T Y02A 50/00 in human health protection, e.g. against extreme weather**
- D Y02A 50/10 . against extreme weather events
<administratively transferred to [Y02A 50/00](#) ADD>
- D Y02A 50/12 . . Early warning systems for extreme weather events
<administratively transferred to [Y02A 50/00](#) ADD>

- D Y02A 50/14
- Storm shelters or storm cellars
 - <administratively transferred to [Y02A 50/00](#) ADD>
- D Y02A 50/16
- Landslide or mudflow monitoring or protecting systems
 - <administratively transferred to [Y02A 50/00](#) ADD>
- T Y02A 50/20
- Air quality improvement or preservation, *e.g. vehicle emission control or emission reduction by using catalytic converters*
- D Y02A 50/21
- Mechanical or electrostatic filtering in heating, ventilation or air conditioning [HVAC]
 - <administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/22
- Air sterilisation or disinfection
 - <administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/23
- Emission reduction or control
 - <administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/232
- Catalytic converters
 - <administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/2322
- for exhaust after-treatment of internal combustion engines in vehicles
 - <administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/2324
- Three way catalysts, i.e. for controlled oxidation or reduction of exhaust gases, e.g. stoichiometric equivalence ratio
 - <administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/2325
- Selective Catalytic Reactors [SCR]
 - <administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/2326
- for industrial applications
 - <administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/2327
- in chemical or petrochemical processes,
 - <administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/2328
- Burners or incinerators e.g. of waste or waste gases
 - <administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/234
- Physical or chemical processes, e.g. absorption, adsorption or filtering, characterised by the type of pollutant
 - <administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/2341
- Carbon monoxide [CO]
 - <administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/2342
- Carbon dioxide [CO₂]
 - <administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/2343
- Lead [Pb]
 - <administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/2344
- Nitrogen oxides [NO_x]
 - <administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/2345
- Nitrogen dioxide [NO₂]
 - <administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/2346
- Ammonia [NH₃]
 - <administratively transferred to [Y02A 50/20](#) ADD>

- D Y02A 50/2347 Ground-level ozone
<administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/2348 Sulfur oxides [SO_x]
<administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/2349 Sulfur dioxide [SO₂]
<administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/235 Volatile organic compounds [VOC]
<administratively transferred to [Y02A 50/20](#) ADD>
- T Y02A 50/2351 . . ~~→~~ Atmospheric particulate matter [PM], e.g. carbon smoke microparticles, smog, aerosol particles, dust
- D Y02A 50/2352 the particulate matter coming from a source on-board a vehicle, e.g. removed by diesel particulate filters [DPF]
<administratively transferred to [Y02A 50/2351](#) ADD>
- D Y02A 50/2353 the particulate matter coming from stationary sources, e.g. power plants, steel mills, smelters, cement plants, refineries or incinerators
<administratively transferred to [Y02A 50/2351](#) ADD>
- D Y02A 50/2354 Cyclones
<administratively transferred to [Y02A 50/2351](#) ADD>
- D Y02A 50/2355 Filters
<administratively transferred to [Y02A 50/2351](#) ADD>
- D Y02A 50/2356 Scrubbers, spray chambers, pack towers
<administratively transferred to [Y02A 50/2351](#) ADD>
- D Y02A 50/2357 Electrostatic precipitators
<administratively transferred to [Y02A 50/2351](#) ADD>
- D Y02A 50/2358 . . . Biological purification of waste gases
<administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/2359 with gas-solid contact
<administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/24 . . . Pollution monitoring
<administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/241 . . . specially adapted for public areas
<administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/242 . . . characterized by the pollutant
<administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/243 Carbon monoxide [CO]
<administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/244 Carbon dioxide [CO₂]
<administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/245 Nitrogen Oxides [NO_x]
<administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/246 Ammonia [NH₃]
<administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/247 Ozone [O₃]
<administratively transferred to [Y02A 50/20](#) ADD>

- D Y02A 50/248 Sulfur oxides [SO_x]
<administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/249 Volatile Organic Compounds [VOC]
<administratively transferred to [Y02A 50/20](#) ADD>
- D Y02A 50/25 Atmospheric particulate matter [PM] e.g. carbon smoke microparticles, smog, aerosol particles, dust
<administratively transferred to [Y02A 50/20](#) ADD>
- T Y02A 50/30 . Against vector-borne diseases, e.g. mosquito-borne, fly-borne, tick-borne or waterborne diseases whose impact is exacerbated by climate change
- D Y02A 50/31 . . Vector control
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/32 . . . using natural substances as pesticides or insecticides, for fighting the disease vector
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/321 characterised by the vector
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/322 Ticks
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/323 Insects
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/324 Stink bugs, bed bugs, kissing bugs or triatomine bugs
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/325 Chigoe or jigger fleas, cat fleas, moorhen fleas or rat fleas
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/326 Sand flies, black flies or Tsetse flies
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/327 Mosquitoes
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/328 Aedes
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/329 Culex
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/33 Anopheles; Culiseta; Mansonia; Psorophora
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/331 Snails of the genus Biomphalaria, Oncomelania or Bulinus
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/332 characterised by the natural substance
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/333 Substances of botanical origin, e.g. essential oils, waxes, flowers, seeds, leaves or wood
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/334 Plant oils, i.e. vegetable or essential oils
<administratively transferred to [Y02A 50/30](#) ADD>

- D Y02A 50/335 Canola oil
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/336 Castor oil
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/337 Catnip oil, e.g. nepetalactone
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/338 Cedar oil
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/339 Cinnamon oil
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/34 Citronella oil
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/341 Coconut oil
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/342 Eucalyptus oil
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/343 Lemon oil
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/344 Geranium oil
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/345 Mustard oil
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/346 Neem oil, e.g. Azadirachtin
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/347 Orange oil
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/348 Soybean oil
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/349 Camphor
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/35 Garlic
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/351 Pepper
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/352 Rotenone
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/353 Tobacco or nicotine
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/354 Pyrethrum, e.g. Chrysanthemum cinerariifolium
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/356 Fermented microbes, e.g. abemectins or spinosad
<administratively transferred to [Y02A 50/30](#) ADD>

- D Y02A 50/357 Substances of mineral origin
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/358 Sulfur
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/359 Kaolin; Diatomaceous earth
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/36 Natural soaps
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/37 . . . Means for catching or killing the vector, e.g. traps or nets
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/371 the vector being mosquitoes
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/372 Impregnated bed nets; Long-lasting insecticidal bed nets [LLINs]
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/373 the vector being flies
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/374 the vector being stink bugs, kissing bugs, triatomine bugs or fleas
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/375 the vector being ticks
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/38 . . Medical treatment of vector-borne diseases characterised by the agent
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/381 . . . the vector-borne disease being caused by a virus
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/382 of the genus Alphavirus, i.e. Chikungunya
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/383 the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/384 of the genus Flavivirus
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/385 the disease being Dengue
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/386 the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/387 the disease being Yellow fever, i.e. Ochropyra
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/388 the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/389 the disease being Japanese encephalitis
<administratively transferred to [Y02A 50/30](#) ADD>

- D Y02A 50/39 the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/391 the disease being Zika
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/392 the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/393 the disease being West Nile fever
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/394 the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/395 the disease being Tick-borne encephalitis [TBE]
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/396 the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/397 of the genus Nairovirus, i.e. Congo-Crimean haemorrhagic fever or Rift valley fever or Hantaan haemorrhagic fever
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/398 . . . the vector-borne disease being caused by a bacteria
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/399 of the genus Borrelia
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/40 the bacteria being *Borrelia crocidurae*, *Borrelia duttoni*, *Borrelia hermsii*, *Borrelia hispanica*, *Borrelia miyamotoi*, *Borrelia parkeri* or *Borrelia turicatae*, i.e. relapsing fever or borreliosis
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/401 the bacteria being *Borrelia burgdorferi*, i.e. Lyme disease or Lyme borreliosis
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/402 of the genus Rickettsia, Orientia, Ehrlichia, Neorickettsia, Neoehrlichia or Anaplasma, i.e. Rickettsial diseases, e.g. spotted fever
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/403 the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/404 the bacteria being *Francisella tularensis*, i.e. Tularaemia
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/405 the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/406 the bacteria being *Yersinia pestis*, i.e. Plague
<administratively transferred to [Y02A 50/30](#) ADD>

- D Y02A 50/407 the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/408 . . . the vector-borne disease being caused by a protozoa
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/409 of the genus Leishmania i.e. Leishmaniasis, Sand-fly fever, phlebotomus fever, kala-azar, black fever or Dumdum fever
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/41 the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/411 of the genus Plasmodium, i.e. Malaria
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/412 the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/413 of the genus Trypanosoma
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/414 the protozoa being Trypanosoma cruzi i.e. Chagas disease or American trypanosomiasis
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/415 the protozoa being Trypanosoma brucei gambiense or Trypanosoma brucei rhodesiense, i.e. Human African trypanosomiasis or sleeping sickness
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/416 the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/417 . . . the vector-borne disease being caused by a helminth, i.e. Helmanthiasis
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/418 of the phylum nematoda
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/419 the nematode being Dracunculus medinensis or Guinea worm, i.e. Dracunculiasis
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/42 the nematode being a filarial worm
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/421 the filarial worm being Wuchereria bancrofti, brugia malayi or Brugia timor, i.e. Lymphatic filariasis
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/422 the filarial worm being Onchocerca volvulus, i.e. Onchocerciasis or river blindness
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/423 the helminth being a trematode flatworm of the genus Schistosoma, i.e. Schistosomiasis or bilharziasis
<administratively transferred to [Y02A 50/30](#) ADD>

- D Y02A 50/45 . . Means for preventing water-borne diseases
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/451 . . . Genetic or molecular screening of pathogens
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/452 . . . Non-water-based sanitation
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/453 Pit latrines
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/454 Dry closets e.g. incinerator closets
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/455 having means for adding powder, e.g. earth
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/456 Chemical toilets
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/46 . . Medical treatment of waterborne diseases characterized by the agent
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/462 . . . The waterborne disease being caused by a virus
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/463 the virus being the Hepatitis A virus [HAV]
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/464 the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/465 the virus being the poliovirus, i.e. Poliomyelitis or Polio
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/466 the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/467 of the genus Polyomavirus: JC virus or BK virus, i.e. Polyomavirus infection
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/468 . . . The waterborne disease being caused by a bacteria
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/469 the bacteria being clostridium botulinum, i.e. Botulism
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/47 the bacteria being Campylobacter jejuni, i.e. Campylobacteriosis
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/471 the bacteria being Vibrio cholerae, i.e. Cholera
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/472 the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/473 the bacteria being Escherichia coli, i.e. E. coli Infection
<administratively transferred to [Y02A 50/30](#) ADD>

- D Y02A 50/474 the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/475 of the genus *Shigella*, i.e. Dysentery
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/476 the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/478 of the genus *Legionella*, i.e. Legionellosis or Legionnaires' disease
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/479 of the genus *Leptospira*, i.e. Leptospirosis
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/48 the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/481 of the genus *Salmonella*, i.e. Salmonellosis
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/482 the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/483 the bacteria being *Salmonella typhi*, i.e. Typhoid fever
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/484 the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/485 . . . The waterborne disease being caused by a protozoa
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/486 the protozoan being *Entamoeba histolytica*, i.e. Amoebiasis
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/487 the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/488 the protozoan being *Cryptosporidium parvum*, i.e. Cryptosporidiosis
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/489 the medicinal preparation containing antigens or antibodies, e.g. vaccines, antisera
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/49 the protozoan being *Cyclospora cayetanensis*, i.e. Cyclosporiasis
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/491 the protozoan being *Giardia lamblia* or *Giardia intestinalis*, i.e. Giardiasis
<administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/492 of the phylum Microsporidia, i.e. Microsporidiosis
<administratively transferred to [Y02A 50/30](#) ADD>

- D Y02A 50/50
- • Chemical or biological analysis of biological material for identifying the disease, e.g. blood or urine testing, rapid diagnostic tests [RTDs] or immunological testing
- <administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/51
- • • the disease being Chikungunya fever
- <administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/52
- • • the disease being Cholera
- <administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/53
- • • the disease being Dengue fever
- <administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/54
- • • the disease being Hepatitis A
- <administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/55
- • • the disease being Leishmaniasis, Sand-fly fever, phlebotomus fever, kala-azar, black fever or Dumdum fever
- <administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/56
- • • the disease being Leptospirosis
- <administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/57
- • • the disease being Lyme disease or Lyme borreliosis
- <administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/58
- • • the disease being Malaria
- <administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/59
- • • the disease being Typhus or typhoid fever
- <administratively transferred to [Y02A 50/30](#) ADD>
- D Y02A 50/60
- • • the disease being Yellow fever or Ochropyra
- <administratively transferred to [Y02A 50/30](#) ADD>
- U Y02A 90/00**
- Technologies having an indirect contribution to adaptation to climate change**
- T Y02A 90/10
- Information and communication technologies [ICT] supporting adaptation to climate change, e.g. *for weather forecasting or climate simulation*
- D Y02A 90/12
- • Specially adapted for meteorology, e.g. weather forecasting, climate modelling
- <administratively transferred to [Y02A 90/10](#) ADD>
- D Y02A 90/13
- • • Monitoring or forecasting for establishing the amount of global warming
- <administratively transferred to [Y02A 90/10](#) ADD>
- D Y02A 90/14
- • • Real-time meteorological measuring
- <administratively transferred to [Y02A 90/10](#) ADD>
- D Y02A 90/15
- • • Weather or climate specific geographic information systems [GIS], databases or models
- <administratively transferred to [Y02A 90/10](#) ADD>
- D Y02A 90/16
- • • Climate simulation; Climate scenario development
- <administratively transferred to [Y02A 90/10](#) ADD>
- D Y02A 90/17
- • • Weather surveillance systems using the reflection or reradiation of electromagnetic waves
- <administratively transferred to [Y02A 90/10](#) ADD>

- D Y02A 90/18
 - . . . Radar-based
 - <administratively transferred to [Y02A 90/10](#) ADD>
- D Y02A 90/19
 - . . . Based on light detection and ranging [LIDAR] systems
 - <administratively transferred to [Y02A 90/10](#) ADD>
- D Y02A 90/20
 - . . specially adapted for the handling or processing of medical or healthcare data, relating to climate change
 - <administratively transferred to [Y02A 90/10](#) ADD>
- D Y02A 90/22
 - . . . for administrative, organizational or management aspects influenced by climate change adaptation
 - <administratively transferred to [Y02A 90/10](#) ADD>
- D Y02A 90/24
 - . . . for detecting, monitoring or modelling of medical or healthcare patterns in geographical or climatic regions, e.g. epidemics or pandemics
 - <administratively transferred to [Y02A 90/10](#) ADD>
- D Y02A 90/26
 - . . . for diagnosis or treatment, for medical simulation or for handling medical devices
 - <administratively transferred to [Y02A 90/10](#) ADD>
- T Y02A 90/30
 - . Assessment of water resources
- D Y02A 90/32
 - . . based on topography, e.g. mapping, location, large scale investigation of water resources or satellite or aerial imagery
 - <administratively transferred to [Y02A 90/30](#) ADD>
- D Y02A 90/34
 - . . Hydrogeology; Hydrogeophysics
 - <administratively transferred to [Y02A 90/30](#) ADD>
- D Y02A 90/342
 - . . . by measuring electric resistivity
 - <administratively transferred to [Y02A 90/30](#) ADD>
- D Y02A 90/344
 - . . . by measuring magnetic field strength
 - <administratively transferred to [Y02A 90/30](#) ADD>
- D Y02A 90/36
 - . . Seismic methods or vibration analysis
 - <administratively transferred to [Y02A 90/30](#) ADD>
- U Y02A 90/40
 - . Monitoring or fighting invasive species

Project: RP0678 (Y02B)

- U Y02B 10/00 Integration of renewable energy sources in buildings**
- T Y02B 10/10
 - . Photovoltaic [PV]
- D Y02B 10/12
 - . . Roof systems for PV cells
 - <administratively transferred to [Y02B 10/10](#) ADD>
- D Y02B 10/14
 - . . PV hubs
 - <administratively transferred to [Y02B 10/10](#) ADD>
- T Y02B 10/20
 - . Solar thermal
- D Y02B 10/22
 - . . Evacuated solar collectors
 - <administratively transferred to [Y02B 10/20](#) ADD>
- D Y02B 10/24
 - . . Air conditioning or refrigeration systems
 - <administratively transferred to [Y02B 10/20](#) ADD>
- U Y02B 10/30
 - . Wind power
- U Y02B 10/40
 - . Geothermal heat-pumps
- U Y02B 10/50
 - . Hydropower in dwellings

- T Y02B 10/70 · Hybrid systems, e.g. *uninterruptible or back-up power supplies integrating renewable energies*
- D Y02B 10/72 · · Uninterruptible or back-up power supplies integrating renewable energies
<administratively transferred to [Y02B 10/70](#) ADD>
- T Y02B 20/00 Energy efficient lighting technologies, e.g. *halogen lamps or gas discharge lamps***
- D Y02B 20/10 · Energy saving technologies for incandescent lamps
<administratively transferred to [Y02B 20/00](#) ADD>
- D Y02B 20/12 · · Halogen lamps
<administratively transferred to [Y02B 20/00](#) ADD>
- D Y02B 20/125 · · · High voltage halogen lamps
<administratively transferred to [Y02B 20/00](#) ADD>
- D Y02B 20/14 · · Specially adapted circuits
<administratively transferred to [Y02B 20/00](#) ADD>
- D Y02B 20/142 · · · for resonant dimming, e.g. by means of high frequency resonant bridges
<administratively transferred to [Y02B 20/00](#) ADD>
- D Y02B 20/144 · · · for pulse modulation dimming
<administratively transferred to [Y02B 20/00](#) ADD>
- D Y02B 20/146 · · · for phase control dimming
<administratively transferred to [Y02B 20/00](#) ADD>
- D Y02B 20/148 · · · · for reverse phase control dimming
<administratively transferred to [Y02B 20/00](#) ADD>
- D Y02B 20/16 · Gas discharge lamps, e.g. fluorescent lamps, high intensity discharge lamps [HID] or molecular radiators
<administratively transferred to [Y02B 20/00](#) ADD>
- D Y02B 20/18 · · Low pressure and fluorescent lamps
<administratively transferred to [Y02B 20/00](#) ADD>
- D Y02B 20/181 · · · Fluorescent powders
<administratively transferred to [Y02B 20/00](#) ADD>
- D Y02B 20/183 · · · Specially adapted circuits
<administratively transferred to [Y02B 20/00](#) ADD>
- D Y02B 20/185 · · · · Self-resonant bridges
<administratively transferred to [Y02B 20/00](#) ADD>
- D Y02B 20/186 · · · · Controlled bridges
<administratively transferred to [Y02B 20/00](#) ADD>
- D Y02B 20/188 · · · · · with dedicated cathode heating circuitry
<administratively transferred to [Y02B 20/00](#) ADD>
- D Y02B 20/19 · · Mechanical details of compact fluorescent lamps
<administratively transferred to [Y02B 20/00](#) ADD>
- D Y02B 20/20 · · High pressure [UHP] or high intensity discharge lamps [HID]
<administratively transferred to [Y02B 20/00](#) ADD>
- D Y02B 20/202 · · · Specially adapted circuits
<administratively transferred to [Y02B 20/00](#) ADD>

- D Y02B 20/204
 - Details of the starting circuit
 - <administratively transferred to [Y02B 20/00](#) ADD>
- D Y02B 20/206
 - for hot restarting
 - <administratively transferred to [Y02B 20/00](#) ADD>
- D Y02B 20/208
 - providing detection and prevention of anomalous lamp operating conditions
 - <administratively transferred to [Y02B 20/00](#) ADD>
- D Y02B 20/22
 - . . Other discharge lamps
 - <administratively transferred to [Y02B 20/00](#) ADD>
- T Y02B 20/30
 - . Semiconductor lamps, e.g. solid state lamps [SSL] light emitting diodes [LED] or organic LED [OLED]
- D Y02B 20/32
 - . . Electroluminescent panels
 - <administratively transferred to [Y02B 20/30](#) ADD>
- D Y02B 20/34
 - . . Inorganic LEDs
 - <administratively transferred to [Y02B 20/30](#) ADD>
- D Y02B 20/341
 - . . . Specially adapted circuits
 - <administratively transferred to [Y02B 20/30](#) ADD>
- D Y02B 20/342
 - for driving the LEDs directly from an AC voltage source, e.g. with only passive components
 - <administratively transferred to [Y02B 20/30](#) ADD>
- D Y02B 20/343
 - Linear regulators
 - <administratively transferred to [Y02B 20/30](#) ADD>
- D Y02B 20/345
 - configured as a current source
 - <administratively transferred to [Y02B 20/30](#) ADD>
- D Y02B 20/346
 - Switching regulators
 - <administratively transferred to [Y02B 20/30](#) ADD>
- D Y02B 20/347
 - configured as a current source
 - <administratively transferred to [Y02B 20/30](#) ADD>
- D Y02B 20/348
 - Resonant bridges
 - <administratively transferred to [Y02B 20/30](#) ADD>
- D Y02B 20/36
 - . . Organic LEDs, i.e. OLEDs for general illumination
 - <administratively transferred to [Y02B 20/30](#) ADD>
- D Y02B 20/38
 - . . Constructional details
 - <administratively transferred to [Y02B 20/30](#) ADD>
- D Y02B 20/383
 - . . . Adaptation to Edison sockets
 - <administratively transferred to [Y02B 20/30](#) ADD>
- D Y02B 20/386
 - . . . Retrofitting in tubes
 - <administratively transferred to [Y02B 20/30](#) ADD>
- T Y02B 20/40
 - . Control techniques providing energy savings, *e.g. smart controller or presence detection*
- D Y02B 20/42
 - . . based on timing means or schedule
 - <administratively transferred to [Y02B 20/40](#) ADD>
- D Y02B 20/44
 - . . based on detection of the user
 - <administratively transferred to [Y02B 20/40](#) ADD>

- D Y02B 20/445
- • Controlling the access to premises
<administratively transferred to [Y02B 20/40](#) ADD>
- D Y02B 20/46
- • based on detection of the illumination level
<administratively transferred to [Y02B 20/40](#) ADD>
- D Y02B 20/48
- • Smart controllers
<administratively transferred to [Y02B 20/40](#) ADD>
- D Y02B 20/70
- Used in particular applications
<administratively transferred to [Y02B 20/00](#) ADD>
- M Y02B 20/72
- • in street lighting
- T Y02B 30/00**
- Energy efficient heating, ventilation or air conditioning [HVAC]**
- D Y02B 30/08
- relating to domestic heating, space heating, domestic hot water heating [DHW] or supply systems
<administratively transferred to [Y02B 30/00](#) ADD>
- D Y02B 30/10
- • using boilers
<administratively transferred to [Y02B 30/00](#) ADD>
- D Y02B 30/102
- • • Condensing boilers
<administratively transferred to [Y02B 30/00](#) ADD>
- D Y02B 30/104
- • • • Moistening the combustion air with condensate from the combustion gases
<administratively transferred to [Y02B 30/00](#) ADD>
- D Y02B 30/106
- • • • Removing condensate from the heater
<administratively transferred to [Y02B 30/00](#) ADD>
- D Y02B 30/108
- • • Modular boilers, i.e. connecting different sections within a boiler or cascading multiple boilers
<administratively transferred to [Y02B 30/00](#) ADD>
- T Y02B 30/12
- • Hot water central heating systems using heat pumps
- D Y02B 30/125
- • • combined with the use of heat accumulated in storage masses
<administratively transferred to [Y02B 30/12](#) ADD>
- M Y02B 30/13
- • Hot air central heating systems using heat pumps
- D Y02B 30/14
- • Central heating systems having more than one heat source
<administratively transferred to [Y02B 30/00](#) ADD>
- D Y02B 30/16
- • Central heating systems using steam or condensate extracted or exhausted from steam engine plants
<administratively transferred to [Y02B 30/00](#) ADD>
- M Y02B 30/17
- • District heating
- M Y02B 30/18
- • Domestic hot-water supply systems using recuperated or waste heat
- D Y02B 30/20
- • Heat consumers, i.e. devices to provide the end-user with heat
<administratively transferred to [Y02B 30/00](#) ADD>
- D Y02B 30/22
- • • Low temperature radiators, i.e. convectors, radiators or a mixture of both with increased heat-exchange surface being suitable for systems working with a low temperature heat transfer medium
<administratively transferred to [Y02B 30/00](#) ADD>
- D Y02B 30/24
- • • ceiling, wall or underfloor heating arrangements for being used in combination with water central heating system
<administratively transferred to [Y02B 30/00](#) ADD>

- D Y02B 30/26
 - • • Radiant panels electrically heated
<administratively transferred to [Y02B 30/00](#) ADD>
- D Y02B 30/28
 - • • Direct fired air heaters, i.e. the air being in direct contact with the exhaust gases of the burner
<administratively transferred to [Y02B 30/00](#) ADD>
- D Y02B 30/50
 - Systems profiting of external or internal conditions
<administratively transferred to [Y02B 30/00](#) ADD>
- M Y02B 30/52
 - ■ Heat recovery pumps, i.e. heat pump based systems or units able to transfer the thermal energy from one area of the premises or part of the facilities to a different one, improving the overall efficiency
- T Y02B 30/54
 - ■ Free-cooling systems
- D Y02B 30/542
 - • • Air based, e.g. mixed outside air and recirculation systems
<administratively transferred to [Y02B 30/54](#) ADD>
- D Y02B 30/545
 - • • Cooling using dew point control and direct humidifiers
<administratively transferred to [Y02B 30/54](#) ADD>
- D Y02B 30/547
 - • • Using energy from the ground by air circulation, e.g. "Canadian well"
<administratively transferred to [Y02B 30/54](#) ADD>
- T Y02B 30/56
 - ■ Heat recovery units
- D Y02B 30/563
 - • • Air to air
<administratively transferred to [Y02B 30/56](#) ADD>
- D Y02B 30/566
 - • • Water to water
<administratively transferred to [Y02B 30/56](#) ADD>
- D Y02B 30/60
 - Other technologies for heating or cooling
<administratively transferred to [Y02B 30/00](#) ADD>
- M Y02B 30/62
 - ■ Absorption based systems
- M Y02B 30/625
 - • ■ combined with heat or power generation [CHP], e.g. trigeneration
- D Y02B 30/64
 - • Adsorption based systems
<administratively transferred to [Y02B 30/00](#) ADD>
- D Y02B 30/66
 - • Magnetic cooling
<administratively transferred to [Y02B 30/00](#) ADD>
- T Y02B 30/70
 - Efficient control or regulation technologies-, e.g. *for control of refrigerant flow, motor or heating* (empty, see subgroups)
- D Y02B 30/72
 - • Electric or electronic refrigerant flow control
<administratively transferred to [Y02B 30/70](#) ADD>
- D Y02B 30/74
 - • Technologies based on motor control
<administratively transferred to [Y02B 30/70](#) ADD>
- D Y02B 30/741
 - • • Speed regulation of the compressor
<administratively transferred to [Y02B 30/70](#) ADD>
- D Y02B 30/743
 - • • Speed control of condenser or evaporator fans, e.g. for controlling the pressure of the condenser
<administratively transferred to [Y02B 30/70](#) ADD>
- D Y02B 30/745
 - • • Speed regulation of pumps in flow control systems
<administratively transferred to [Y02B 30/70](#) ADD>

- D Y02B 30/746
- • • Speed regulation of fans in flow control systems
<administratively transferred to [Y02B 30/70](#) ADD>
- D Y02B 30/748
- • • Speed regulation of fans and pumps in cooling towers
<administratively transferred to [Y02B 30/70](#) ADD>
- D Y02B 30/76
- • Centralised control
<administratively transferred to [Y02B 30/70](#) ADD>
- D Y02B 30/762
- • • of heating or domestic hot water [DHW] systems
<administratively transferred to [Y02B 30/70](#) ADD>
- D Y02B 30/765
- • • of refrigeration machines, plants or systems, including combined heating and refrigeration systems or heat pumps
<administratively transferred to [Y02B 30/70](#) ADD>
- D Y02B 30/767
- • • of air distribution systems
<administratively transferred to [Y02B 30/70](#) ADD>
- D Y02B 30/78
- • Ventilation adapted to air quality
<administratively transferred to [Y02B 30/70](#) ADD>
- D Y02B 30/80
- Ultrasonic humidifiers
<administratively transferred to [Y02B 30/70](#) ADD>
- T Y02B 30/90
- Passive houses; Double facade technology
- D Y02B 30/92
- • with air flow into the conditioned premises or facilities
<administratively transferred to [Y02B 30/90](#) ADD>
- D Y02B 30/94
- • Improving the thermodynamic properties of the premises or facilities
<administratively transferred to [Y02B 30/90](#) ADD>
- T Y02B 40/00**
- Technologies aiming at improving the efficiency of home appliances, e.g. induction cooking or efficient technologies for refrigerators, freezers or dish washers**
- D Y02B 40/10
- relating to domestic cooking
<administratively transferred to [Y02B 40/00](#) ADD>
- D Y02B 40/12
- • Induction cooking in kitchen stoves
<administratively transferred to [Y02B 40/00](#) ADD>
- D Y02B 40/123
- • • Control circuit or coil power supply
<administratively transferred to [Y02B 40/00](#) ADD>
- D Y02B 40/126
- • • Coil arrangements
<administratively transferred to [Y02B 40/00](#) ADD>
- D Y02B 40/14
- • Microwave ovens
<administratively transferred to [Y02B 40/00](#) ADD>
- D Y02B 40/143
- • • Control circuit or magnetron power supply
<administratively transferred to [Y02B 40/00](#) ADD>
- D Y02B 40/146
- • • Load impedance matching, e.g. by acting upon phase or frequency
<administratively transferred to [Y02B 40/00](#) ADD>
- D Y02B 40/16
- • Improved cooking stoves
<administratively transferred to [Y02B 40/00](#) ADD>
- D Y02B 40/163
- • • Fuel efficient biomass cooking stoves
<administratively transferred to [Y02B 40/00](#) ADD>

- D Y02B 40/166
- • • Fuel-efficient gas-cooking stoves
<administratively transferred to [Y02B 40/00](#) ADD>
- T Y02B 40/18
- • ~~Solar-cooking stoves or furnaces~~ using renewables, e.g. solar cooking stoves, furnaces or solar heating
- D Y02B 40/30
- relating to refrigerators or freezers
<administratively transferred to [Y02B 40/00](#) ADD>
- D Y02B 40/32
- • Motor-speed control of compressors or fans
<administratively transferred to [Y02B 40/00](#) ADD>
- D Y02B 40/34
- • Thermal insulation
<administratively transferred to [Y02B 40/00](#) ADD>
- D Y02B 40/40
- relating to dish washers
<administratively transferred to [Y02B 40/00](#) ADD>
- D Y02B 40/42
- • Motor-speed control of pumps
<administratively transferred to [Y02B 40/00](#) ADD>
- D Y02B 40/44
- • Heat recovery, e.g. of washing water
<administratively transferred to [Y02B 40/00](#) ADD>
- D Y02B 40/46
- • Optimisation of water quantity, e.g. of hot water
<administratively transferred to [Y02B 40/00](#) ADD>
- D Y02B 40/50
- Relating to washing machines
<administratively transferred to [Y02B 40/00](#) ADD>
- D Y02B 40/52
- • Motor-speed control of drum or pumps
<administratively transferred to [Y02B 40/00](#) ADD>
- D Y02B 40/54
- • Heat recovery, e.g. of washing water
<administratively transferred to [Y02B 40/00](#) ADD>
- D Y02B 40/56
- • Optimisation of water quantity
<administratively transferred to [Y02B 40/00](#) ADD>
- D Y02B 40/58
- • Solar heating
<administratively transferred to [Y02B 40/18](#) ADD>
- D Y02B 40/70
- relating to laundry dryers
<administratively transferred to [Y02B 40/00](#) ADD>
- D Y02B 40/72
- • Motor-speed control of drum or fans
<administratively transferred to [Y02B 40/00](#) ADD>
- D Y02B 40/74
- • Solar heating
<administratively transferred to [Y02B 40/18](#) ADD>
- D Y02B 40/80
- relating to vacuum cleaners
<administratively transferred to [Y02B 40/00](#) ADD>
- D Y02B 40/82
- • Motor-speed or motor power consumption control
<administratively transferred to [Y02B 40/00](#) ADD>
- D Y02B 40/84
- • Motor overheating or overloading prevention
<administratively transferred to [Y02B 40/00](#) ADD>
- D Y02B 40/90
- Energy efficient batteries, ultracapacitors, supercapacitors or double-layer capacitors charging or discharging systems or methods specially adapted for portable applications
<administratively transferred to [Y02B 40/00](#) ADD>

T	Y02B 50/00	Energy efficient technologies in elevators, escalators and moving walkways, e.g. energy saving or recuperation technologies
D	Y02B 50/10	<ul style="list-style-type: none"> • in elevators <p style="margin-left: 20px;"><administratively transferred to Y02B 50/00 ADD></p>
D	Y02B 50/12	<ul style="list-style-type: none"> • • Energy saving technologies <p style="margin-left: 20px;"><administratively transferred to Y02B 50/00 ADD></p>
D	Y02B 50/122	<ul style="list-style-type: none"> • • • by adapted call allocation <p style="margin-left: 20px;"><administratively transferred to Y02B 50/00 ADD></p>
D	Y02B 50/125	<ul style="list-style-type: none"> • • • by adapting the motion profile <p style="margin-left: 20px;"><administratively transferred to Y02B 50/00 ADD></p>
D	Y02B 50/127	<ul style="list-style-type: none"> • • • by control of auxiliary devices <p style="margin-left: 20px;"><administratively transferred to Y02B 50/00 ADD></p>
D	Y02B 50/14	<ul style="list-style-type: none"> • • Energy recuperation technologies <p style="margin-left: 20px;"><administratively transferred to Y02B 50/00 ADD></p>
D	Y02B 50/142	<ul style="list-style-type: none"> • • • with electrical storage <p style="margin-left: 20px;"><administratively transferred to Y02B 50/00 ADD></p>
D	Y02B 50/144	<ul style="list-style-type: none"> • • • with mechanical storage <p style="margin-left: 20px;"><administratively transferred to Y02B 50/00 ADD></p>
D	Y02B 50/146	<ul style="list-style-type: none"> • • • with pressure storage <p style="margin-left: 20px;"><administratively transferred to Y02B 50/00 ADD></p>
D	Y02B 50/148	<ul style="list-style-type: none"> • • • by delivering current to the grid for hydraulic elevators <p style="margin-left: 20px;"><administratively transferred to Y02B 50/00 ADD></p>
D	Y02B 50/20	<ul style="list-style-type: none"> • in escalators and moving walkways <p style="margin-left: 20px;"><administratively transferred to Y02B 50/00 ADD></p>
D	Y02B 50/22	<ul style="list-style-type: none"> • • Energy saving technologies <p style="margin-left: 20px;"><administratively transferred to Y02B 50/00 ADD></p>
D	Y02B 50/225	<ul style="list-style-type: none"> • • • by adapting the motion profile <p style="margin-left: 20px;"><administratively transferred to Y02B 50/00 ADD></p>
D	Y02B 50/24	<ul style="list-style-type: none"> • • Energy recuperation technologies <p style="margin-left: 20px;"><administratively transferred to Y02B 50/00 ADD></p>
U	Y02B 70/00	Technologies for an efficient end-user side electric power management and consumption
T	Y02B 70/10	<ul style="list-style-type: none"> • Technologies improving the efficiency by using switched-mode power supplies [SMPS], i.e. efficient power electronics conversion <i>e.g. power factor correction or reduction of losses in power supplies or efficient standby modes</i>
D	Y02B 70/12	<ul style="list-style-type: none"> • • Power factor correction technologies for power supplies <p style="margin-left: 20px;"><administratively transferred to Y02B 70/10 ADD></p>
D	Y02B 70/123	<ul style="list-style-type: none"> • • • Passive technologies <p style="margin-left: 20px;"><administratively transferred to Y02B 70/10 ADD></p>
D	Y02B 70/126	<ul style="list-style-type: none"> • • • Active technologies <p style="margin-left: 20px;"><administratively transferred to Y02B 70/10 ADD></p>
D	Y02B 70/14	<ul style="list-style-type: none"> • • Reduction of losses in power supplies <p style="margin-left: 20px;"><administratively transferred to Y02B 70/10 ADD></p>

- D Y02B 70/1408
- • • Low frequency active rectification, i.e. from a low frequency AC grid or generator
 - <administratively transferred to [Y02B 70/10](#) ADD>
- D Y02B 70/1416
- • • Converters benefiting from a resonance, e.g. resonant or quasi-resonant converters
 - <administratively transferred to [Y02B 70/10](#) ADD>
- D Y02B 70/1425
- • • • in non-galvanically isolated DC/DC converters
 - <administratively transferred to [Y02B 70/10](#) ADD>
- D Y02B 70/1433
- • • • in galvanically isolated DC/DC converters
 - <administratively transferred to [Y02B 70/10](#) ADD>
- D Y02B 70/1441
- • • • in DC/AC or AC/DC converters
 - <administratively transferred to [Y02B 70/10](#) ADD>
- D Y02B 70/145
- • • • in AC/AC converters
 - <administratively transferred to [Y02B 70/10](#) ADD>
- D Y02B 70/1458
- • • Synchronous rectification
 - <administratively transferred to [Y02B 70/10](#) ADD>
- D Y02B 70/1466
- • • • in non-galvanically isolated DC/DC converters
 - <administratively transferred to [Y02B 70/10](#) ADD>
- D Y02B 70/1475
- • • • in galvanically isolated DC/DC converters
 - <administratively transferred to [Y02B 70/10](#) ADD>
- D Y02B 70/1483
- • • by using wide band gap based power semiconductors, i.e. power converters integrating silicon carbide [SiC], gallium nitride [GaN], gallium arsenide [GaAs] or diamond power switches
 - <administratively transferred to [Y02B 70/10](#) ADD>
- D Y02B 70/1491
- • • Other technologies for reduction of losses, e.g. non-dissipative snubbers, diode reverse recovery losses minimisation, zero voltage switching [ZVS], zero current switching [ZCS] or soft switching converters
 - <administratively transferred to [Y02B 70/10](#) ADD>
- D Y02B 70/16
- • Efficient standby or energy saving modes, e.g. detecting absence of load or auto-off
 - <administratively transferred to [Y02B 70/10](#) ADD>
- T Y02B 70/30
- Systems integrating technologies related to power network operation and communication or information technologies for improving the carbon footprint of the management of residential or tertiary loads, i.e. smart grids as climate change mitigation technology in the buildings sector, including also the last stages of power distribution and the control, monitoring or operating management systems at local level (~~smart grids supporting the management or operation of end-user stationary applications in general, e.g. with no associated climate change mitigation effect Y04S 20/00~~)
- D Y02B 70/32
- • End-user application control systems
 - <administratively transferred to [Y02B 70/30](#) ADD>
- D Y02B 70/3208
- • • characterised by the aim of the control
 - <administratively transferred to [Y02B 70/30](#) ADD>
- D Y02B 70/3216
- • • • General power management systems
 - <administratively transferred to [Y02B 70/30](#) ADD>
- M Y02B 70/3225
- • ~~→~~ Demand response systems, e.g. load shedding, peak shaving

- D Y02B 70/3233 The system entering an energy saving mode, i.e. sleep, low-power or standby modes
<administratively transferred to [Y02B 70/30](#) ADD>
- D Y02B 70/3241 Domotics or building automation systems
<administratively transferred to [Y02B 70/30](#) ADD>
- D Y02B 70/325 involving home automation communication networks
<administratively transferred to [Y02B 70/30](#) ADD>
- D Y02B 70/3258 . . . characterised by the end-user application
<administratively transferred to [Y02B 70/30](#) ADD>
- D Y02B 70/3266 The end-user application being or involving home appliances
<administratively transferred to [Y02B 70/30](#) ADD>
- D Y02B 70/3275 The home appliances being or involving heating ventilating or air conditioning [HVAC] units
<administratively transferred to [Y02B 70/30](#) ADD>
- D Y02B 70/3283 The system involving the remote operation of lamps or lighting equipment
<administratively transferred to [Y02B 70/30](#) ADD>
- D Y02B 70/3291 The end-user application involving uninterruptible power supply [UPS] systems or standby or emergency generators (for uninterruptible power supply systems or standby or emergency generators in the last power distribution stages Y04S 20/12)
<administratively transferred to [Y02B 70/30](#) ADD>
- T Y02B 70/34 . . Smart metering supporting the carbon neutral operation of end-user applications in buildings
- D Y02B 70/343 . . . Systems which determine the environmental impact of user behavior
<administratively transferred to [Y02B 70/34](#) ADD>
- D Y02B 70/346 . . . Systems which monitor the performance of renewable electricity generating systems, e.g. of solar panels
<administratively transferred to [Y02B 70/34](#) ADD>
- T Y02B 80/00 Architectural or constructional elements improving the thermal performance of buildings**
- T Y02B 80/10 . Insulation, *e.g. vacuum or aerogel insulation*
- D Y02B 80/12 . . Slab shaped vacuum insulation
<administratively transferred to [Y02B 80/10](#) ADD>
- D Y02B 80/14 . . Slab shaped aerogel insulation
<administratively transferred to [Y02B 80/10](#) ADD>
- D Y02B 80/20 . Windows or doors
<administratively transferred to [Y02B 80/00](#) ADD>
- T Y02B 80/22 . . Glazing, *e.g. vacuum glazing*
- D Y02B 80/24 . . . Vacuum glazing
<administratively transferred to [Y02B 80/22](#) ADD>
- D Y02B 80/26 . . . Other special glazing, e.g. aerogel
<administratively transferred to [Y02B 80/22](#) ADD>
- D Y02B 80/28 . . Wooden or plastic frames with extra insulation
<administratively transferred to [Y02B 80/00](#) ADD>

- D Y02B 80/30
- Roofs
<administratively transferred to [Y02B 80/00](#) ADD>
- M Y02B 80/32
- ~~Roof garden systems~~
- D Y02B 80/34
- ~~Roof coverings with high solar reflectance~~
<administratively transferred to [Y02B 80/00](#) ADD>
- D Y02B 80/40
- ~~Floors specially adapted for storing heat or cold~~
<administratively transferred to [Y02B 80/00](#) ADD>
- D Y02B 80/50
- ~~Light dependent control systems for sun shading~~
<administratively transferred to [Y02B 80/00](#) ADD>
- U Y02B 90/00**
- Enabling technologies or technologies with a potential or indirect contribution to GHG emissions mitigation**
- T Y02B 90/10
- Applications of fuel cells in buildings
- D Y02B 90/12
- ~~Cogeneration of electricity with other electric generators~~
<administratively transferred to [Y02B 90/10](#) ADD>
- D Y02B 90/14
- ~~Emergency, uninterruptible or back-up power supplies integrating fuel cells~~
<administratively transferred to [Y02B 90/10](#) ADD>
- D Y02B 90/16
- ~~Cogeneration or combined heat and power generation, e.g. for domestic hot water~~
<administratively transferred to [Y02B 90/10](#) ADD>
- D Y02B 90/18
- ~~Fuel cells specially adapted to portable applications, e.g. mobile phone, laptop~~
<administratively transferred to [Y02B 90/10](#) ADD>
- T Y02B 90/20
- ~~Systems integrating technologies related to power network operation and communication or information technologies mediating in the improvement of the carbon footprint of the management of residential or tertiary loads, i.e. smart *Smart* grids as enabling technology in buildings sector (smart grids supporting the management or operation of end-user stationary applications in general, or like technologies with no associated climate change mitigation effect [Y04S 20/00](#))~~
- D Y02B 90/22
- ~~Systems characterised by the monitored, controlled or operated end-user elements or equipments~~
<administratively transferred to [Y02B 90/20](#) ADD>
- D Y02B 90/222
- ~~the elements or equipments being or involving energy storage units, uninterruptible power supply [UPS] systems or standby or emergency generators involved in the last power distribution stages (energy storage units involved in power generation, transmission or distribution Y04S 10/14; uninterruptible power supply systems or standby or emergency generators as end-user application Y04S 20/248)~~
<administratively transferred to [Y02B 90/20](#) ADD>
- D Y02B 90/224
- ~~the elements or equipments being or involving protection elements, switches, relays or circuit breakers~~
<administratively transferred to [Y02B 90/20](#) ADD>
- D Y02B 90/226
- ~~the elements or equipments being or involving power plugs, sockets, adapters or power strips~~
<administratively transferred to [Y02B 90/20](#) ADD>
- D Y02B 90/228
- ~~the element or elements being a direct current power network, grid or distribution line~~
<administratively transferred to [Y02B 90/20](#) ADD>

- D Y02B 90/24
- • Smart metering mediating in the carbon neutral operation of end-user applications in buildings
 - <administratively transferred to [Y02B 90/20](#) ADD>
- D Y02B 90/241
- • • Systems characterised by remote reading
 - <administratively transferred to [Y02B 90/20](#) ADD>
- D Y02B 90/242
- • • • from a fixed location
 - <administratively transferred to [Y02B 90/20](#) ADD>
- D Y02B 90/243
- • • • from a mobile location
 - <administratively transferred to [Y02B 90/20](#) ADD>
- D Y02B 90/244
- • • • the remote reading system including mechanisms for turning on/off the supply
 - <administratively transferred to [Y02B 90/20](#) ADD>
- D Y02B 90/245
- • • Displaying of usage with respect to time, e.g. monitoring evolution of usage, relating usage to weather conditions
 - <administratively transferred to [Y02B 90/20](#) ADD>
- D Y02B 90/246
- • • Utility meters which are networked together, e.g. within a single building
 - <administratively transferred to [Y02B 90/20](#) ADD>
- D Y02B 90/247
- • • Retrofitting of installed meters
 - <administratively transferred to [Y02B 90/20](#) ADD>
- D Y02B 90/248
- • • Systems oriented to metering of generated energy or power
 - <administratively transferred to [Y02B 90/20](#) ADD>
- D Y02B 90/26
- • Communication technology specific aspects
 - <administratively transferred to [Y02B 90/20](#) ADD>
- D Y02B 90/2607
- • • characterised by data transport means between the monitoring, controlling or managing units and the monitored, controlled or operated electrical equipment
 - <administratively transferred to [Y02B 90/20](#) ADD>
- D Y02B 90/2615
- • • • using the power network as support for the transmission
 - <administratively transferred to [Y02B 90/20](#) ADD>
- D Y02B 90/2623
- • • • • using pulsed signals
 - <administratively transferred to [Y02B 90/20](#) ADD>
- D Y02B 90/263
- • • • • using modification of a parameter of the network power signal
 - <administratively transferred to [Y02B 90/20](#) ADD>
- D Y02B 90/2638
- • • • using a wired telecommunication network or a data transmission bus
 - <administratively transferred to [Y02B 90/20](#) ADD>
- D Y02B 90/2646
- • • • using phone lines
 - <administratively transferred to [Y02B 90/20](#) ADD>
- D Y02B 90/2653
- • • • using wireless data transmission
 - <administratively transferred to [Y02B 90/20](#) ADD>
- D Y02B 90/2661
- • • • • By means of mobile telephony
 - <administratively transferred to [Y02B 90/20](#) ADD>
- D Y02B 90/2669
- • • • involving the use of Internet protocol
 - <administratively transferred to [Y02B 90/20](#) ADD>

- D Y02B 90/2676 . . . Communication technology specific aspects
<administratively transferred to [Y02B 90/20](#) ADD>
- D Y02B 90/2684 using dedicated transmission supports
<administratively transferred to [Y02B 90/20](#) ADD>
- D Y02B 90/2692 using the power network as support for the transmission
<administratively transferred to [Y02B 90/20](#) ADD>

Project: RP0678 (Y02C)

- D Y02C 10/00** **~~CO₂ capture or storage~~**
<administratively transferred to [Y02C 20/40](#) ADD>
- D Y02C 10/02 . Capture by biological separation
<administratively transferred to [Y02C 20/40](#) ADD>
- D Y02C 10/04 . Capture by chemical separation
<administratively transferred to [Y02C 20/40](#) ADD>
- D Y02C 10/06 . Capture by absorption
<administratively transferred to [Y02C 20/40](#) ADD>
- D Y02C 10/08 . Capture by adsorption
<administratively transferred to [Y02C 20/40](#) ADD>
- D Y02C 10/10 . Capture by membranes or diffusion
<administratively transferred to [Y02C 20/40](#) ADD>
- D Y02C 10/12 . Capture by rectification and condensation
<administratively transferred to [Y02C 20/40](#) ADD>
- D Y02C 10/14 . Subterranean or submarine CO₂ storage
<administratively transferred to [Y02C 20/40](#) ADD>
- M Y02C 20/00** **Capture or disposal of greenhouse gases [~~GHG~~] other than CO₂**
- U Y02C 20/10 . of nitrous oxide (N₂O)
- U Y02C 20/20 . of methane
- U Y02C 20/30 . of perfluorocarbons [PFC], hydrofluorocarbons [HFC] or sulfur hexafluoride [SF₆]
- N Y02C 20/40 . of CO₂

Project: N/A (Y02D)

Y02D

CLIMATE CHANGE MITIGATION TECHNOLOGIES IN INFORMATION AND COMMUNICATION TECHNOLOGIES [ICT], I.E. INFORMATION AND COMMUNICATION TECHNOLOGIES AIMING AT THE REDUCTION OF ~~THIR~~THEIR OWN ENERGY USE

NOTES

1. This subclass covers information and communication technologies [ICT] whose purpose is to minimize the use of energy during the operation of the involved ICT equipment.
2. This subclass does not cover the use of an ICT technology supporting energy efficient operation of a further piece of equipment, nor the reuse or recycling of ICT equipment.

Project: RP0678 (Y02D)

T	Y02D 10/00	Energy efficient computing, e.g. low power processors, power management or thermal management
D	Y02D 10/10	<ul style="list-style-type: none"> • Reducing energy consumption at the single machine level, e.g. processors, personal computers, peripherals or power supply <p><administratively transferred to Y02D 10/00 ADD></p>
D	Y02D 10/11	<ul style="list-style-type: none"> • • involving a plurality of components <p><administratively transferred to Y02D 10/00 ADD></p>
D	Y02D 10/12	<ul style="list-style-type: none"> • • acting upon the main processing unit <p><administratively transferred to Y02D 10/00 ADD></p>
D	Y02D 10/122	<ul style="list-style-type: none"> • • • Low-power processors <p><administratively transferred to Y02D 10/00 ADD></p>
D	Y02D 10/124	<ul style="list-style-type: none"> • • • Performance modes <p><administratively transferred to Y02D 10/00 ADD></p>
D	Y02D 10/126	<ul style="list-style-type: none"> • • • Frequency modification <p><administratively transferred to Y02D 10/00 ADD></p>
D	Y02D 10/128	<ul style="list-style-type: none"> • • • Clock disabling <p><administratively transferred to Y02D 10/00 ADD></p>
D	Y02D 10/13	<ul style="list-style-type: none"> • • Access, addressing or allocation within memory systems or architectures, e.g. to reduce power consumption or heat production or to increase battery life <p><administratively transferred to Y02D 10/00 ADD></p>
D	Y02D 10/14	<ul style="list-style-type: none"> • • Interconnection, or transfer of information or other signals between, memories, peripherals or central processing units <p><administratively transferred to Y02D 10/00 ADD></p>
D	Y02D 10/15	<ul style="list-style-type: none"> • • acting upon peripherals <p><administratively transferred to Y02D 10/00 ADD></p>
D	Y02D 10/151	<ul style="list-style-type: none"> • • • the peripheral being a bus <p><administratively transferred to Y02D 10/00 ADD></p>
D	Y02D 10/152	<ul style="list-style-type: none"> • • • the peripheral being a memory control unit [MCU] <p><administratively transferred to Y02D 10/00 ADD></p>
D	Y02D 10/153	<ul style="list-style-type: none"> • • • the peripheral being a display <p><administratively transferred to Y02D 10/00 ADD></p>
D	Y02D 10/154	<ul style="list-style-type: none"> • • • the peripheral being disc or storage devices <p><administratively transferred to Y02D 10/00 ADD></p>
D	Y02D 10/1542	<ul style="list-style-type: none"> • • • • the peripheral being a CD-ROM unit <p><administratively transferred to Y02D 10/00 ADD></p>
D	Y02D 10/155	<ul style="list-style-type: none"> • • • the peripheral being a cursor control device <p><administratively transferred to Y02D 10/00 ADD></p>
D	Y02D 10/156	<ul style="list-style-type: none"> • • • the peripheral being a keyboard <p><administratively transferred to Y02D 10/00 ADD></p>
D	Y02D 10/157	<ul style="list-style-type: none"> • • • the peripheral being a modem <p><administratively transferred to Y02D 10/00 ADD></p>
D	Y02D 10/158	<ul style="list-style-type: none"> • • • the peripheral being a PCMCIA card <p><administratively transferred to Y02D 10/00 ADD></p>

- D Y02D 10/159
 - • • the peripheral being a printer
 - <administratively transferred to [Y02D 10/00](#) ADD>
- D Y02D 10/1592
 - • • • Data transfer to print units
 - <administratively transferred to [Y02D 10/00](#) ADD>
- D Y02D 10/16
 - • Cooling means for computing equipment provided with thermal management
 - <administratively transferred to [Y02D 10/00](#) ADD>
- D Y02D 10/17
 - • Power management
 - <administratively transferred to [Y02D 10/00](#) ADD>
- D Y02D 10/171
 - • • Selective power distribution
 - <administratively transferred to [Y02D 10/00](#) ADD>
- D Y02D 10/172
 - • • Controlling the supply voltage
 - <administratively transferred to [Y02D 10/00](#) ADD>
- D Y02D 10/173
 - • • Monitoring user presence
 - <administratively transferred to [Y02D 10/00](#) ADD>
- D Y02D 10/174
 - • • Battery monitoring
 - <administratively transferred to [Y02D 10/00](#) ADD>
- D Y02D 10/175
 - • • Power strips aiming to energy efficient operation
 - <administratively transferred to [Y02D 10/00](#) ADD>
- D Y02D 10/20
 - Reducing energy consumption by means of multiprocessor or multiprocessing based techniques, other than acting upon the power supply
 - <administratively transferred to [Y02D 10/00](#) ADD>
- D Y02D 10/22
 - • Resource allocation
 - <administratively transferred to [Y02D 10/00](#) ADD>
- D Y02D 10/24
 - • Scheduling
 - <administratively transferred to [Y02D 10/00](#) ADD>
- D Y02D 10/26
 - • Increasing resource utilisation, e.g. virtualisation, consolidation
 - <administratively transferred to [Y02D 10/00](#) ADD>
- D Y02D 10/28
 - • Load distribution
 - <administratively transferred to [Y02D 10/00](#) ADD>
- D Y02D 10/30
 - Reducing energy consumption in distributed systems
 - <administratively transferred to [Y02D 10/00](#) ADD>
- D Y02D 10/32
 - • Delegation or migration
 - <administratively transferred to [Y02D 10/00](#) ADD>
- D Y02D 10/34
 - • Monitoring
 - <administratively transferred to [Y02D 10/00](#) ADD>
- D Y02D 10/36
 - • Resource sharing
 - <administratively transferred to [Y02D 10/00](#) ADD>
- D Y02D 10/40
 - Reducing energy consumption at software or application level
 - <administratively transferred to [Y02D 10/00](#) ADD>
- D Y02D 10/41
 - • Compilation
 - <administratively transferred to [Y02D 10/00](#) ADD>
- D Y02D 10/42
 - • Installation
 - <administratively transferred to [Y02D 10/00](#) ADD>

- D Y02D 10/43
- At application level, i.e. feedback, prediction or usage patterns
<administratively transferred to [Y02D 10/00](#) ADD>
- D Y02D 10/44
- Suspending or hibernating, performance or eco-modes, operating system support, e.g. advanced configuration and power interface [ACPI]
<administratively transferred to [Y02D 10/00](#) ADD>
- D Y02D 10/45
- Information retrieval in databases
<administratively transferred to [Y02D 10/00](#) ADD>
- T Y02D 30/00** **High level techniques for reducing *Reducing* energy consumption in communication networks**
- D Y02D 30/10
- by proxying, i.e. delegating network functionalities while in low-power mode, e.g. ECMA 393 standard
<administratively transferred to [Y02D 30/00](#) ADD>
- D Y02D 30/20
- by energy-aware routing
<administratively transferred to [Y02D 30/00](#) ADD>
- D Y02D 30/30
- by signaling and coordination, e.g. signaling reduction, link layer discovery protocol [LLDP], control policies, green TCP
<administratively transferred to [Y02D 30/00](#) ADD>
- D Y02D 30/32
- specifically suitable for Ethernet, e.g. IEEE802.3az
<administratively transferred to [Y02D 30/00](#) ADD>
- D Y02D 30/34
- specifically suitable for DSL
<administratively transferred to [Y02D 30/00](#) ADD>
- D Y02D 30/40
- Application modification for reducing energy consumption, e.g. green peer-to-peer,
<administratively transferred to [Y02D 30/00](#) ADD>
- N Y02D 30/50
- in wire-line communication networks, e.g. low power modes or reduced link rate
- N Y02D 30/70
- in wireless communication networks
- D Y02D 50/00** **Techniques for reducing energy consumption in wire-line communication networks**
<administratively transferred to [Y02D 30/50](#) ADD>
- D Y02D 50/10
- using reduced link rate, e.g. adaptive link rate, not involving auto-negotiation
<administratively transferred to [Y02D 30/50](#) ADD>
- D Y02D 50/20
- using subset functionality
<administratively transferred to [Y02D 30/50](#) ADD>
- D Y02D 50/30
- by selective link activation in bundled links
<administratively transferred to [Y02D 30/50](#) ADD>
- D Y02D 50/40
- by operating in low-power or sleep mode
<administratively transferred to [Y02D 30/50](#) ADD>
- D Y02D 50/42
- specifically suitable for Ethernet, e.g. IEEE802.3az
<administratively transferred to [Y02D 30/50](#) ADD>
- D Y02D 50/44
- specifically suitable for DSL
<administratively transferred to [Y02D 30/50](#) ADD>
- D Y02D 70/00** **Techniques for reducing energy consumption in wireless communication networks**
<administratively transferred to [Y02D 30/70](#) ADD>

- D Y02D 70/10 • according to the Radio Access Technology [RAT]
 <administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/12 • in 3rd Generation Partnership Project [3GPP] networks
 <administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/122 • . . in 2nd generation [2G] networks
 <administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/1222 • . . . in Global System for Mobile Communications [GSM] networks
 <administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/1224 • . . . in General Packet Radio Service [GPRS] networks
 <administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/1226 • . . . in Enhanced Data rates for GSM Evolution [EDGE] networks
 <administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/124 • . . in 3rd generation [3G] networks
 <administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/1242 • . . . in Universal Mobile Telecommunications Systems [UMTS] networks
 <administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/1244 • . . . in High-Speed Downlink Packet Access [HSDPA] networks
 <administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/1246 • . . . in High-Speed Uplink Packet Access [HSUPA] networks
 <administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/126 • . . in 4th generation [4G] networks
 <administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/1262 • . . . in Long-Term Evolution [LTE] networks
 <administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/1264 • . . . in Long-Term Evolution Advanced [LTE-A] networks
 <administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/14 • in Institute of Electrical and Electronics Engineers [IEEE] networks
 <administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/142 • . . in Wireless Local Area Networks [WLAN]
 <administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/144 • . . in Bluetooth and Wireless Personal Area Networks [WPAN]
 <administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/146 • . . in Worldwide Interoperability for Microwave Access [WiMAX] networks
 <administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/16 • in other wireless communication networks
 <administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/162 • . . in Zigbee networks
 <administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/164 • . . in Satellite Navigation receivers
 <administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/166 • . . in Radio Frequency Identification [RF-ID] transceivers
 <administratively transferred to [Y02D 30/70](#) ADD>

- D Y02D 70/168
 - • • in Digital Video Broadcasting [DVB] networks
<administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/20
 - independent of Radio Access Technologies
<administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/21
 - • in machine-to-machine [M2M] and device-to-device [D2D] communications
<administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/22
 - • in peer-to-peer [P2P], ad hoc and mesh networks
<administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/23
 - • in Voice over IP [VoIP] networks
<administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/24
 - • in Discontinuous Reception [DRX] networks
<administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/25
 - • in Discontinuous Transmission [DTX] networks
<administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/26
 - • in wearable devices, e.g. watches, glasses
<administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/30
 - Power-based selection of communication route or path
<administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/32
 - • based on wireless node resources
<administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/322
 - • • based on characteristics of available antennas
<administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/324
 - • • based on transmission power
<administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/326
 - • • based on available power or energy
<administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/34
 - • based on transmission quality or channel quality
<administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/38
 - • based on geographic position or location
<administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/39
 - • using selective relaying for reaching a BTS [Base Transceiver Station] or an access point
<administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/40
 - According to the transmission technology
<administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/42
 - • Near-field transmission systems, e.g. inductive or capacitive coupling
<administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/44
 - • Radio transmission systems, i.e. using radiation field
<administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/442
 - • • Diversity systems; Multi-antenna systems, i.e. transmission or reception using multiple antennas
<administratively transferred to [Y02D 30/70](#) ADD>

- D Y02D 70/444
 - • • using two or more spaced independent antennas
<administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/446
 - • • Relay systems
<administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/448
 - • • for communication between two or more posts
<administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/449
 - • • at least one of which is mobile
<administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/46
 - • Transmission systems employing electromagnetic waves other than radio-waves, e.g. infrared, visible or ultraviolet light, or employing corpuscular radiation, e.g. quantum communication
<administratively transferred to [Y02D 30/70](#) ADD>
- D Y02D 70/48
 - • Transmission systems employing sonic, ultrasonic or infrasonic waves
<administratively transferred to [Y02D 30/70](#) ADD>

Project: RP0678 (Y02E)

- U Y02E REDUCTION OF GREENHOUSE GAS [GHG] EMISSIONS, RELATED TO ENERGY GENERATION, TRANSMISSION OR DISTRIBUTION**
- U Y02E 10/00 Energy generation through renewable energy sources**
- T Y02E 10/10
 - Geothermal energy
- D Y02E 10/12
 - • Earth-coil heat exchangers
<administratively transferred to [Y02E 10/10](#) ADD>
- D Y02E 10/125
 - • • Compact tube assemblies, e.g. geothermal probes
<administratively transferred to [Y02E 10/10](#) ADD>
- D Y02E 10/14
 - • Systems injecting medium directly into ground, e.g. hot dry rock system, underground water
<administratively transferred to [Y02E 10/10](#) ADD>
- D Y02E 10/16
 - • Systems injecting medium into a closed well
<administratively transferred to [Y02E 10/10](#) ADD>
- D Y02E 10/18
 - • Systems exchanging heat with fluids in pipes, e.g. fresh water or waste water
<administratively transferred to [Y02E 10/10](#) ADD>
- T Y02E 10/20
 - Hydro energy
- D Y02E 10/22
 - • Conventional, e.g. with dams, turbines and waterwheels
<administratively transferred to [Y02E 10/20](#) ADD>
- D Y02E 10/223
 - • • Turbines or waterwheels, e.g. details of the rotor
<administratively transferred to [Y02E 10/20](#) ADD>
- D Y02E 10/226
 - • • Other parts or details
<administratively transferred to [Y02E 10/20](#) ADD>
- D Y02E 10/28
 - • Tidal stream or damless hydropower, e.g. sea flood and ebb, river, stream
<administratively transferred to [Y02E 10/20](#) ADD>
- T Y02E 10/30
 - Energy from the sea, e.g. using wave energy or salinity gradient (tidal stream [Y02E 10/28](#))
- D Y02E 10/32
 - • Oscillating water column [OWC]
<administratively transferred to [Y02E 10/30](#) ADD>

- D Y02E 10/34
- • Ocean thermal energy conversion [OTEC]
<administratively transferred to [Y02E 10/30](#) ADD>
- D Y02E 10/36
- • Salinity gradient
<administratively transferred to [Y02E 10/30](#) ADD>
- D Y02E 10/38
- • Wave energy or tidal swell, e.g. Pelamis-type
<administratively transferred to [Y02E 10/30](#) ADD>
- T Y02E 10/40
- Solar thermal energy, e.g. solar towers
- D Y02E 10/41
- • Tower concentrators
<administratively transferred to [Y02E 10/40](#) ADD>
- D Y02E 10/42
- • Dish collectors
<administratively transferred to [Y02E 10/40](#) ADD>
- D Y02E 10/43
- • Fresnel lenses
<administratively transferred to [Y02E 10/40](#) ADD>
- U Y02E 10/44
- • Heat exchange systems
- D Y02E 10/45
- • Trough concentrators
<administratively transferred to [Y02E 10/40](#) ADD>
- T Y02E 10/46
- • Conversion of thermal power into mechanical power, e.g. Rankine, Stirling *or* solar thermal engines
- D Y02E 10/465
- • • Thermal updraft
<administratively transferred to [Y02E 10/46](#) ADD>
- U Y02E 10/47
- • Mountings or tracking
- T Y02E 10/50
- Photovoltaic [PV] energy
- U Y02E 10/52
- • PV systems with concentrators
- D Y02E 10/54
- • Material technologies
<administratively transferred to [Y02E 10/50](#) ADD>
- M Y02E 10/541
- • • CuInSe_2 material PV cells
- M Y02E 10/542
- • • Dye sensitized solar cells
- M Y02E 10/543
- • • Solar cells from Group II-VI materials
- M Y02E 10/544
- • • Solar cells from Group III-V materials
- M Y02E 10/545
- • • Microcrystalline silicon PV cells
- M Y02E 10/546
- • • Polycrystalline silicon PV cells
- M Y02E 10/547
- • • Monocrystalline silicon PV cells
- M Y02E 10/548
- • • Amorphous silicon PV cells
- M Y02E 10/549
- • • organic Organic PV cells
- T Y02E 10/56
- • Power conversion electric or electronic aspects systems, e.g. maximum power point trackers
- D Y02E 10/563
- • • for grid-connected applications
<administratively transferred to [Y02E 10/56](#) ADD>
- D Y02E 10/566
- • • concerning power management inside the plant, e.g. battery charging/ discharging, economical operation, hybridisation with other energy sources
<administratively transferred to [Y02E 10/56](#) ADD>
- D Y02E 10/58
- • • Maximum power point tracking [MPPT] systems
<administratively transferred to [Y02E 10/56](#) ADD>
- U Y02E 10/60
- Thermal-PV hybrids

- U Y02E 10/70 · Wind energy
- T Y02E 10/72 · · Wind turbines with rotation axis in wind direction
- D Y02E 10/721 · · · Blades or rotors
<administratively transferred to [Y02E 10/72](#) ADD>
- D Y02E 10/722 · · · Components or gearbox
<administratively transferred to [Y02E 10/72](#) ADD>
- D Y02E 10/723 · · · Control of turbines
<administratively transferred to [Y02E 10/72](#) ADD>
- D Y02E 10/725 · · · Generator or configuration
<administratively transferred to [Y02E 10/72](#) ADD>
- D Y02E 10/726 · · · Nacelles
<administratively transferred to [Y02E 10/72](#) ADD>
- M Y02E 10/727 · · · Offshore ~~towers~~ wind turbines
- M Y02E 10/728 · · · Onshore ~~towers~~ wind turbines
- U Y02E 10/74 · · Wind turbines with rotation axis perpendicular to the wind direction
- T Y02E 10/76 · · Power conversion electric or electronic aspects
- D Y02E 10/763 · · · for grid-connected applications
<administratively transferred to [Y02E 10/76](#) ADD>
- D Y02E 10/766 · · · concerning power management inside the plant, e.g. battery charging/
discharging, economical operation, hybridisation with other energy sources
<administratively transferred to [Y02E 10/76](#) ADD>

- T Y02E 20/00 **Combustion technologies with mitigation potential****
- D Y02E 20/10 · Combined combustion
<administratively transferred to [Y02E 20/00](#) ADD>
- M Y02E 20/12 · · Heat utilisation in combustion or incineration of waste
- M Y02E 20/14 · · Combined heat and power generation [CHP]
- M Y02E 20/16 · · Combined cycle power plant [CCPP], or combined cycle gas turbine [CCGT]
- T Y02E 20/18 · · · Integrated gasification combined cycle [IGCC], e.g. combined with carbon
capture and storage [CCS]
- D Y02E 20/185 · · · · combined with carbon capture and storage [CCS]
<administratively transferred to [Y02E 20/18](#) ADD>
- T Y02E 20/30 · Technologies for a more efficient combustion or heat usage
- T Y02E 20/32 · · Direct CO₂ mitigation
- D Y02E 20/322 · · · Use of synair, i.e. a mixture of recycled CO₂ and pure O₂
<administratively transferred to [Y02E 20/32](#) ADD>
- D Y02E 20/324 · · · Use of reactants before or during combustion
<administratively transferred to [Y02E 20/32](#) ADD>
- D Y02E 20/326 · · · Segregation from fumes, including use of reactants downstream from
combustion or deep cooling
<administratively transferred to [Y02E 20/32](#) ADD>
- D Y02E 20/328 · · · Controls of combustion specifically inferring on CO₂ emissions
<administratively transferred to [Y02E 20/32](#) ADD>
- T Y02E 20/34 · · Indirect CO₂ mitigation, i.e. by acting on non CO₂-directly related matters of
the process, e.g. more efficient use of fuels pre-heating or heat recovery

- D Y02E 20/342 . . . Gold flame
<administratively transferred to [Y02E 20/34](#) ADD>
- D Y02E 20/344 . . . Oxyfuel combustion
<administratively transferred to [Y02E 20/34](#) ADD>
- D Y02E 20/346 . . . Unmixed combustion
<administratively transferred to [Y02E 20/34](#) ADD>
- D Y02E 20/348 . . . Air pre-heating
<administratively transferred to [Y02E 20/34](#) ADD>
- D Y02E 20/36 . . . Heat recovery other than air pre-heating
<administratively transferred to [Y02E 20/30](#) ADD>
- D Y02E 20/363 . . . at fumes level
<administratively transferred to [Y02E 20/30](#) ADD>
- D Y02E 20/366 . . . at burner level
<administratively transferred to [Y02E 20/30](#) ADD>

- U Y02E 30/00 Energy generation of nuclear origin**
- T Y02E 30/10 . Fusion *Nuclear fusion* reactors
- D Y02E 30/12 . . . Magnetic plasma confinement [MPC]
<administratively transferred to [Y02E 30/10](#) ADD>
- D Y02E 30/122 . . . Tokamaks
<administratively transferred to [Y02E 30/10](#) ADD>
- D Y02E 30/124 . . . Stellarators
<administratively transferred to [Y02E 30/10](#) ADD>
- D Y02E 30/126 . . . Other reactors with MPC
<administratively transferred to [Y02E 30/10](#) ADD>
- D Y02E 30/128 . . . First wall, divertor, blanket
<administratively transferred to [Y02E 30/10](#) ADD>
- D Y02E 30/14 . . . Inertial plasma confinement
<administratively transferred to [Y02E 30/10](#) ADD>
- D Y02E 30/16 . . . Injection systems and targets
<administratively transferred to [Y02E 30/10](#) ADD>
- D Y02E 30/18 . . . Low temperature fusion, e.g. "cold fusion"
<administratively transferred to [Y02E 30/10](#) ADD>
- T Y02E 30/30 . Nuclear fission reactors
- D Y02E 30/31 . . . Boiling water reactors
<administratively transferred to [Y02E 30/30](#) ADD>
- D Y02E 30/32 . . . Pressurized water reactors
<administratively transferred to [Y02E 30/30](#) ADD>
- D Y02E 30/33 . . . Gas-cooled reactors
<administratively transferred to [Y02E 30/30](#) ADD>
- D Y02E 30/34 . . . Fast breeder reactors
<administratively transferred to [Y02E 30/30](#) ADD>
- D Y02E 30/35 . . . Liquid metal reactors
<administratively transferred to [Y02E 30/30](#) ADD>

- D Y02E 30/36
- • Pebble-bed reactors
<administratively transferred to [Y02E 30/30](#) ADD>
- D Y02E 30/37
- • Accelerator-driven reactors
<administratively transferred to [Y02E 30/30](#) ADD>
- D Y02E 30/38
- • Fuel
<administratively transferred to [Y02E 30/30](#) ADD>
- D Y02E 30/39
- • Control of nuclear reactions
<administratively transferred to [Y02E 30/30](#) ADD>
- D Y02E 30/40
- • Other aspects relating to nuclear fission
<administratively transferred to [Y02E 30/30](#) ADD>
- U Y02E 40/00 Technologies for an efficient electrical power generation, transmission or distribution**
- T Y02E 40/10
- Flexible AC transmission systems [FACTS]
- D Y02E 40/12
- • Static VAR compensators [SVC], static VAR generators [SVG] or static VAR systems [SVS], including thyristor-controlled reactors [TCR], thyristor-switched reactors [TSR] or thyristor-switched capacitors [TSC]
<administratively transferred to [Y02E 40/10](#) ADD>
- D Y02E 40/14
- • Thyristor-controlled series capacitors [TCSC]
<administratively transferred to [Y02E 40/10](#) ADD>
- D Y02E 40/16
- • Static synchronous compensators [STATCOM]
<administratively transferred to [Y02E 40/10](#) ADD>
- D Y02E 40/18
- • Unified power flow controllers [UPF] or controlled series voltage compensators
<administratively transferred to [Y02E 40/10](#) ADD>
- T Y02E 40/20
- Active power filtering [APF]
- D Y02E 40/22
- • Non-specified or voltage-fed active power filters
<administratively transferred to [Y02E 40/20](#) ADD>
- D Y02E 40/24
- • Current-fed active power filters
<administratively transferred to [Y02E 40/20](#) ADD>
- D Y02E 40/26
- • using a multilevel or multicell converter
<administratively transferred to [Y02E 40/20](#) ADD>
- T Y02E 40/30
- Reactive power compensation (~~Y02E 40/10 take precedence~~)
- D Y02E 40/32
- • using synchronous generators
<administratively transferred to [Y02E 40/30](#) ADD>
- D Y02E 40/34
- • for voltage regulation
<administratively transferred to [Y02E 40/30](#) ADD>
- M Y02E 40/40
- Arrangements for reducing harmonics (~~Y02E 40/10 – Y02E 40/30 take precedence~~)
- U Y02E 40/50
- Arrangements for eliminating or reducing asymmetry in polyphase networks
- T Y02E 40/60
- **Superconducting electric elements or equipment; Superconducting electric elements or equipment or power** systems integrating superconducting elements or equipment
- D Y02E 40/62
- • Superconducting generators
<administratively transferred to [Y02E 40/60](#) ADD>

- D Y02E 40/622
- • • Superconducting synchronous generators
<administratively transferred to [Y02E 40/60](#) ADD>
- D Y02E 40/625
- • • • with a superconducting rotor
<administratively transferred to [Y02E 40/60](#) ADD>
- D Y02E 40/627
- • • Superconducting homopolar generators
<administratively transferred to [Y02E 40/60](#) ADD>
- D Y02E 40/64
- • Superconducting transmission lines or power lines or cables or installations thereof
<administratively transferred to [Y02E 40/60](#) ADD>
- D Y02E 40/641
- • • characterised by their form
<administratively transferred to [Y02E 40/60](#) ADD>
- D Y02E 40/642
- • • • Films or wires on bases or cores
<administratively transferred to [Y02E 40/60](#) ADD>
- D Y02E 40/644
- • • • Multifilaments embedded in normal conductors
<administratively transferred to [Y02E 40/60](#) ADD>
- D Y02E 40/645
- • • characterised by the disposition of thermal insulation
<administratively transferred to [Y02E 40/60](#) ADD>
- D Y02E 40/647
- • • characterised by cooling
<administratively transferred to [Y02E 40/60](#) ADD>
- D Y02E 40/648
- • • Installation of superconducting cables or lines
<administratively transferred to [Y02E 40/60](#) ADD>
- D Y02E 40/66
- • Superconducting transformers or inductors
<administratively transferred to [Y02E 40/60](#) ADD>
- D Y02E 40/67
- • Superconducting energy storage for power networks, e.g. SME, superconducting magnetic storage
<administratively transferred to [Y02E 40/60](#) ADD>
- D Y02E 40/68
- • Protective or switching arrangements for superconducting elements or equipment
<administratively transferred to [Y02E 40/60](#) ADD>
- D Y02E 40/69
- • Current limitation using superconducting elements, including multifunctional current limiters
<administratively transferred to [Y02E 40/60](#) ADD>
- T Y02E 40/70
- ~~Systems integrating technologies related to power network operation and communication or information technologies for improving the carbon footprint of electrical power generation, transmission or distribution, i.e. smart~~Smart grids as climate change mitigation technology in the energy generation sector ~~(smart grids relating to the energy generation sector in general, e.g. with no associated climate change mitigation effect Y04S 10/00)~~
- D Y02E 40/72
- • Systems characterised by the monitoring, control or operation of energy generation units, e.g. distributed generation [DER] or load-side generation
<administratively transferred to [Y02E 40/70](#) ADD>
- D Y02E 40/725
- • • the energy generation units being or involving renewable energy sources
<administratively transferred to [Y02E 40/70](#) ADD>

- D Y02E 40/74
- • Systems characterised by the monitoring, control or operation of flexible AC transmission systems [FACTS] or power factor or reactive power compensating or correcting units
- <administratively transferred to [Y02E 40/70](#) ADD>
- D Y02E 40/76
- • Computing methods or systems for efficient or low carbon management or operation of electric power systems
- <administratively transferred to [Y02E 40/70](#) ADD>
- U Y02E 50/00** **Technologies for the production of fuel of non-fossil origin**
- T Y02E 50/10
- Biofuels, *e.g. bio-diesel*
- D Y02E 50/11
- • CHP turbines for biofeed
- <administratively transferred to [Y02E 50/10](#) ADD>
- D Y02E 50/12
- • Gas turbines for biofeed
- <administratively transferred to [Y02E 50/10](#) ADD>
- D Y02E 50/13
- • Bio-diesel
- <administratively transferred to [Y02E 50/10](#) ADD>
- D Y02E 50/14
- • Bio-pyrolysis
- <administratively transferred to [Y02E 50/10](#) ADD>
- D Y02E 50/15
- • Torrefaction of biomass
- <administratively transferred to [Y02E 50/10](#) ADD>
- D Y02E 50/16
- • Cellulosic bio-ethanol
- <administratively transferred to [Y02E 50/10](#) ADD>
- D Y02E 50/17
- • Grain bio-ethanol
- <administratively transferred to [Y02E 50/10](#) ADD>
- D Y02E 50/18
- • Bio-alcohols produced by other means than fermentation
- <administratively transferred to [Y02E 50/10](#) ADD>
- T Y02E 50/30
- Fuel from waste, *e.g. synthetic alcohol or diesel*
- D Y02E 50/32
- • Synthesis of alcohols or diesel from waste including a pyrolysis or gasification step
- <administratively transferred to [Y02E 50/30](#) ADD>
- D Y02E 50/34
- • Methane
- <administratively transferred to [Y02E 50/30](#) ADD>
- D Y02E 50/343
- • • production by fermentation of organic by-products, e.g. sludge
- <administratively transferred to [Y02E 50/30](#) ADD>
- D Y02E 50/346
- • • from landfill gas
- <administratively transferred to [Y02E 50/30](#) ADD>
- T Y02E 60/00** ***Enabling technologies; Enabling technologies or technologies Technologies* with a potential or indirect contribution to GHG emissions mitigation**
- T Y02E 60/10
- Energy storage *using batteries*
- D Y02E 60/12
- • Battery technologies with an indirect contribution to GHG emissions mitigation (battery technologies specific to electromobility Y02T 10/7005)
- <administratively transferred to [Y02E 60/10](#) ADD>
- D Y02E 60/122
- • • Lithium-ion batteries
- <administratively transferred to [Y02E 60/10](#) ADD>

- D Y02E 60/124 . . . Alkaline secondary batteries, e.g. NiCd or NiMH
<administratively transferred to [Y02E 60/10](#) ADD>
- D Y02E 60/126 . . . Lead-acid batteries
<administratively transferred to [Y02E 60/10](#) ADD>
- D Y02E 60/128 . . . Hybrid cells composed of a half-cell of a fuel-cell type and a half-cell of the secondary-cell type
<administratively transferred to [Y02E 60/10](#) ADD>
- T Y02E 60/13 . . . ~~Ultracapacitors, supercapacitors, double-layer~~ *Energy storage using capacitors*
- T Y02E 60/14 . . . Thermal *energy* storage
- D Y02E 60/142 . . . Sensible heat storage
<administratively transferred to [Y02E 60/14](#) ADD>
- D Y02E 60/145 . . . Latent heat storage
<administratively transferred to [Y02E 60/14](#) ADD>
- D Y02E 60/147 . . . Cold storage
<administratively transferred to [Y02E 60/14](#) ADD>
- D Y02E 60/15 . . . Pressurised fluid storage
<administratively transferred to [Y02E 60/16](#) ADD>
- T Y02E 60/16 . . . Mechanical energy storage, e.g. flywheels *or pressurised fluids*
- D Y02E 60/17 . . . Pumped storage
<administratively transferred to [Y02E 60/16](#) ADD>
- U Y02E 60/30 . . . Hydrogen technology
- T Y02E 60/32 . . . Hydrogen storage
- D Y02E 60/321 . . . Storage of liquefied, solidified, or compressed hydrogen in containers
<administratively transferred to [Y02E 60/32](#) ADD>
- D Y02E 60/322 . . . Storage in caverns
<administratively transferred to [Y02E 60/32](#) ADD>
- D Y02E 60/324 . . . Reversible uptake of hydrogen by an appropriate medium
<administratively transferred to [Y02E 60/32](#) ADD>
- D Y02E 60/325 the medium being carbon
<administratively transferred to [Y02E 60/32](#) ADD>
- D Y02E 60/327 the medium being a metal or rare earth metal, an intermetallic compound or a metal alloy
<administratively transferred to [Y02E 60/32](#) ADD>
- D Y02E 60/328 the medium being an organic compound or a solution thereof
<administratively transferred to [Y02E 60/32](#) ADD>
- U Y02E 60/34 . . . Hydrogen distribution
- T Y02E 60/36 . . . Hydrogen production from non-carbon containing sources, *e.g. by water electrolysis*
- D Y02E 60/362 . . . by chemical reaction with metal hydrides, e.g. hydrolysis of metal borohydrides
<administratively transferred to [Y02E 60/36](#) ADD>
- D Y02E 60/364 . . . by decomposition of inorganic compounds, e.g. splitting of water other than electrolysis, ammonia borane, ammonia
<administratively transferred to [Y02E 60/36](#) ADD>

- D Y02E 60/366
- • • by electrolysis of water
 - <administratively transferred to [Y02E 60/36](#) ADD>
- D Y02E 60/368
- • • • by photo-electrolysis
 - <administratively transferred to [Y02E 60/36](#) ADD>
- T Y02E 60/50
- Fuel cells
- D Y02E 60/52
- • characterised by type or design
 - <administratively transferred to [Y02E 60/50](#) ADD>
- D Y02E 60/521
- • • Proton Exchange Membrane Fuel Cells [PEMFC]
 - <administratively transferred to [Y02E 60/50](#) ADD>
- D Y02E 60/522
- • • • Direct Alcohol Fuel Cells [DAFC]
 - <administratively transferred to [Y02E 60/50](#) ADD>
- D Y02E 60/523
- • • • • Direct Methanol Fuel Cells [DMFC]
 - <administratively transferred to [Y02E 60/50](#) ADD>
- D Y02E 60/525
- • • Solid Oxide Fuel Cells [SOFC]
 - <administratively transferred to [Y02E 60/50](#) ADD>
- D Y02E 60/526
- • • Molten Carbonate Fuel Cells [MCFC]
 - <administratively transferred to [Y02E 60/50](#) ADD>
- D Y02E 60/527
- • • Bio-Fuel Cells
 - <administratively transferred to [Y02E 60/50](#) ADD>
- D Y02E 60/528
- • • Regenerative or indirect fuel cells, e.g. redox flow type batteries
 - <administratively transferred to [Y02E 60/50](#) ADD>
- D Y02E 60/56
- • integrally combined with other energy production systems
 - <administratively transferred to [Y02E 60/50](#) ADD>
- D Y02E 60/563
- • • Cogeneration of mechanical energy, e.g. integral combination of fuel cells and electric motors
 - <administratively transferred to [Y02E 60/50](#) ADD>
- D Y02E 60/566
- • • Production of chemical products inside the fuel cell; incomplete combustion
 - <administratively transferred to [Y02E 60/50](#) ADD>
- M Y02E 60/60
- Arrangements for transfer of electric power between AC networks **via a high-tension DC link, HVDC transmission** or **generators via a high voltage DC link [HVCD]**
- D Y02E 60/70
- Systems integrating technologies related to power network operation and communication or information technologies mediating in the improvement of the carbon footprint of electrical power generation, transmission or distribution; i.e. smart grids as enabling technology in the energy generation sector (smart grids relating to the energy generation sector in general, e.g. with no associated climate change mitigation effect Y04S 10/00)
 - <administratively transferred to [Y02E 60/00](#) ADD>
- D Y02E 60/72
- • Systems characterised by the monitored, controlled or operated power network elements or equipments
 - <administratively transferred to [Y02E 60/00](#) ADD>

- D Y02E 60/721
- • • the elements or equipments being or involving electric vehicles [EV] or hybrid vehicles [HEV], i.e. power aggregation of EV or HEV, vehicle to grid arrangements [V2G] (remote or cooperative charging Y02T 90/168; details associated with the interoperability in the section of transportation, e.g. vehicle recognition, authentication, identification or billing Y02T 90/169)
- <administratively transferred to [Y02E 60/00](#) ADD>
- D Y02E 60/722
- • • the elements or equipments being or involving energy storage units (for systems comprising uninterruptible power supplies or standby generators Y04S 20/12)
- <administratively transferred to [Y02E 60/00](#) ADD>
- D Y02E 60/723
- • • the elements or equipments being or involving electric power substations
- <administratively transferred to [Y02E 60/00](#) ADD>
- D Y02E 60/724
- • • the elements or equipments being or involving switches, relays or circuit breakers, e.g. intelligent electronic devices [IED]
- <administratively transferred to [Y02E 60/00](#) ADD>
- D Y02E 60/725
- • • the elements or equipments being or involving protection elements, arrangements or systems
- <administratively transferred to [Y02E 60/00](#) ADD>
- D Y02E 60/726
- • • the elements or equipments being or involving voltage regulating units
- <administratively transferred to [Y02E 60/00](#) ADD>
- D Y02E 60/727
- • • the elements or equipments being or involving measuring units
- <administratively transferred to [Y02E 60/00](#) ADD>
- D Y02E 60/728
- • • • the measuring units being or involving phasor measuring units [PMU]
- <administratively transferred to [Y02E 60/00](#) ADD>
- D Y02E 60/74
- • Systems characterised by state monitoring, e.g. fault, temperature monitoring, insulator monitoring, corona discharge
- <administratively transferred to [Y02E 60/00](#) ADD>
- D Y02E 60/76
- • Computer aided design [CAD]; Simulation; Modelling
- <administratively transferred to [Y02E 60/00](#) ADD>
- D Y02E 60/78
- • Communication technology specific aspects
- <administratively transferred to [Y02E 60/00](#) ADD>
- D Y02E 60/7807
- • • characterised by data transport means between the monitoring, controlling or managing units and monitored, controlled or operated electrical equipment
- <administratively transferred to [Y02E 60/00](#) ADD>
- D Y02E 60/7815
- • • • using the power network as support for the transmission
- <administratively transferred to [Y02E 60/00](#) ADD>
- D Y02E 60/7823
- • • • • using pulsed signals
- <administratively transferred to [Y02E 60/00](#) ADD>
- D Y02E 60/783
- • • • • using modification of a parameter of the network power signal
- <administratively transferred to [Y02E 60/00](#) ADD>
- D Y02E 60/7838
- • • • using a wired telecommunication network or a data transmission bus
- <administratively transferred to [Y02E 60/00](#) ADD>
- D Y02E 60/7846
- • • • using phone lines
- <administratively transferred to [Y02E 60/00](#) ADD>

- D Y02E 60/7853 using wireless data transmission
<administratively transferred to [Y02E 60/00](#) ADD>
- D Y02E 60/7861 By means of mobile telephony
<administratively transferred to [Y02E 60/00](#) ADD>
- D Y02E 60/7869 involving the use of Internet protocol
<administratively transferred to [Y02E 60/00](#) ADD>
- D Y02E 60/7876 Communication technology specific aspects
<administratively transferred to [Y02E 60/00](#) ADD>
- D Y02E 60/7884 using dedicated transmission supports
<administratively transferred to [Y02E 60/00](#) ADD>
- D Y02E 60/7892 using the power network as support for the transmission
<administratively transferred to [Y02E 60/00](#) ADD>
- U Y02E 70/00 Other energy conversion or management systems reducing GHG emissions**
- D Y02E 70/10 . Hydrogen from electrolysis with energy of non-fossil origin, e.g. PV, wind power, nuclear
<administratively transferred to [Y02E 60/36](#) ADD>
- D Y02E 70/20 . Systems combining fuel cells with production of fuel of non-fossil origin
<administratively transferred to [Y02E 60/50](#) ADD>
- U Y02E 70/30 . Systems combining energy storage with energy generation of non-fossil origin
- D Y02E 70/40 . Energy efficient batteries, ultracapacitors, supercapacitors or double-layer capacitors charging or discharging systems or methods, e.g. auxiliary power consumption reduction, resonant chargers or dischargers, resistive losses minimisation
<administratively transferred to [Y02E 60/10](#) ADD and [Y02E 60/13](#) ADD>

Project: RP0678 (Y02P)

- U Y02P 10/00 Technologies related to metal processing**
- T Y02P 10/10 . Reduction of greenhouse gas [GHG] emissions
- D Y02P 10/12 . . CO₂
<administratively transferred to [Y02P 10/10](#) ADD>
- T Y02P 10/122 . . by capturing *or storing* CO₂
- D Y02P 10/124 Recycling of CO₂-rich gas
<administratively transferred to [Y02P 10/122](#) ADD>
- D Y02P 10/126 Recycling of CO₂-lean gas
<administratively transferred to [Y02P 10/122](#) ADD>
- D Y02P 10/128 Oxycombustion
<administratively transferred to [Y02P 10/122](#) ADD>
- D Y02P 10/13 Post-combustion
<administratively transferred to [Y02P 10/122](#) ADD>
- D Y02P 10/132 CO₂-storage
<administratively transferred to [Y02P 10/122](#) ADD>
- T Y02P 10/134 . . by *avoiding* CO₂ *avoidance, e.g. using hydrogen*
- D Y02P 10/136 using hydrogen, e.g. H₂
<administratively transferred to [Y02P 10/134](#) ADD>

- D Y02P 10/138 Electrolysis
<administratively transferred to [Y02P 10/134](#) ADD>
- D Y02P 10/14 . . Greenhouse gases [GHG] other than CO₂
<administratively transferred to [Y02P 10/10](#) ADD>
- M Y02P 10/143 . . - Methane of methane [CH₄]
- M Y02P 10/146 . . - Perfluorocarbons [PFC]; Hydrofluorocarbons [HFC]; Sulfur hexafluoride [SF₆]
- T Y02P 10/20 . Process efficiency Recycling
- D Y02P 10/21 . . by recovering materials
<administratively transferred to [Y02P 10/20](#) ADD>
- D Y02P 10/212 . . . Recovering metals from waste
<administratively transferred to [Y02P 10/20](#) ADD>
- D Y02P 10/214 by pyro-metallurgy
<administratively transferred to [Y02P 10/20](#) ADD>
- D Y02P 10/216 of Fe
<administratively transferred to [Y02P 10/20](#) ADD>
- D Y02P 10/218 of Al
<administratively transferred to [Y02P 10/20](#) ADD>
- D Y02P 10/22 of Cu
<administratively transferred to [Y02P 10/20](#) ADD>
- D Y02P 10/224 of Co or Ni
<administratively transferred to [Y02P 10/20](#) ADD>
- D Y02P 10/226 of Mg
<administratively transferred to [Y02P 10/20](#) ADD>
- D Y02P 10/228 of Sn
<administratively transferred to [Y02P 10/20](#) ADD>
- D Y02P 10/23 of refractory metals
<administratively transferred to [Y02P 10/20](#) ADD>
- D Y02P 10/232 of Zn or ZnO
<administratively transferred to [Y02P 10/20](#) ADD>
- D Y02P 10/234 by hydro-metallurgy
<administratively transferred to [Y02P 10/20](#) ADD>
- D Y02P 10/236 of Cu
<administratively transferred to [Y02P 10/20](#) ADD>
- D Y02P 10/238 by means other than pyro-metallurgy or hydro-metallurgy
<administratively transferred to [Y02P 10/20](#) ADD>
- D Y02P 10/24 powder metallurgy
<administratively transferred to [Y02P 10/20](#) ADD>
- D Y02P 10/242 . . . Slag reuse in metallurgical processes
<administratively transferred to [Y02P 10/20](#) ADD>
- T Y02P 10/25 . - by increasing the energy efficiency of the process Process efficiency
- D Y02P 10/253 . . . using induction furnaces
<administratively transferred to [Y02P 10/25](#) ADD>

- D Y02P 10/256 . . . Design or operational measures for increasing the efficiency of electric conversion
<administratively transferred to [Y02P 10/25](#) ADD>
- D Y02P 10/259 in electric arc furnaces
<administratively transferred to [Y02P 10/25](#) ADD>
- D Y02P 10/262 in electrolytic cells
<administratively transferred to [Y02P 10/25](#) ADD>
- D Y02P 10/265 . . . by heat recovery
<administratively transferred to [Y02P 10/25](#) ADD>
- D Y02P 10/268 with by-product gas in energy cycle
<administratively transferred to [Y02P 10/25](#) ADD>
- D Y02P 10/271 low temperature heat recovery
<administratively transferred to [Y02P 10/25](#) ADD>
- D Y02P 10/274 medium temperature heat recovery
<administratively transferred to [Y02P 10/25](#) ADD>
- D Y02P 10/277 high temperature heat recovery
<administratively transferred to [Y02P 10/25](#) ADD>
- D Y02P 10/28 using by-product gases
<administratively transferred to [Y02P 10/25](#) ADD>
- D Y02P 10/283 using water, e.g. for cooling
<administratively transferred to [Y02P 10/25](#) ADD>
- D Y02P 10/286 . . . by process control or by modelling
<administratively transferred to [Y02P 10/25](#) ADD>
- D Y02P 10/29 . . . Additive manufacturing
<administratively transferred to [Y02P 10/25](#) ADD>
- D Y02P 10/292 of casting moulds
<administratively transferred to [Y02P 10/25](#) ADD>
- D Y02P 10/295 of metals
<administratively transferred to [Y02P 10/25](#) ADD>
- D Y02P 10/30 . . characterised by the energy source
<administratively transferred to [Y02P 10/25](#) ADD>
- T Y02P 10/32 . ~~→ the energy source being renewable~~ using renewable energy sources
- D Y02P 10/34 . . . Cogeneration with other industries
<administratively transferred to [Y02P 10/32](#) ADD>
- T Y02P 20/00 Technologies relating to chemical industry**
- T Y02P 20/10 . ~~General improvement of production processes causing greenhouse gases [GHG] emissions~~ Process efficiency
- D Y02P 20/12 . . Energy input
<administratively transferred to [Y02P 20/10](#) ADD>
- D Y02P 20/121 . . . Energy efficiency measures, e.g. energy management
<administratively transferred to [Y02P 20/10](#) ADD>
- D Y02P 20/122 characterised by the type of apparatus
<administratively transferred to [Y02P 20/10](#) ADD>

- D Y02P 20/123 Motor systems
<administratively transferred to [Y02P 20/10](#) ADD>
- D Y02P 20/124 Boilers, furnaces, lighting or vacuum systems
<administratively transferred to [Y02P 20/10](#) ADD>
- D Y02P 20/125 Process integration
<administratively transferred to [Y02P 20/10](#) ADD>
- D Y02P 20/126 Membrane separation
<administratively transferred to [Y02P 20/10](#) ADD>
- D Y02P 20/127 Reactive distillation
<administratively transferred to [Y02P 20/10](#) ADD>
- D Y02P 20/128 . . . Alternative fuel sources, e.g. for process heat or steam
<administratively transferred to [Y02P 20/10](#) ADD>
- T Y02P 20/129 . . . Energy recovery, e.g. by cogeneration, H₂ recovery or pressure recovery turbines
- D Y02P 20/13 Cogeneration
<administratively transferred to [Y02P 20/129](#) ADD>
- D Y02P 20/131 Pressure recovery turbines
<administratively transferred to [Y02P 20/129](#) ADD>
- D Y02P 20/132 H₂ recovery
<administratively transferred to [Y02P 20/129](#) ADD>
- T Y02P 20/133 . . . Renewable energy sources, e.g. sunlight
- D Y02P 20/134 Sunlight
<administratively transferred to [Y02P 20/133](#) ADD>
- D Y02P 20/135 Photoelectrochemical processes
<administratively transferred to [Y02P 20/133](#) ADD>
- D Y02P 20/136 of biological origin, e.g. biomass, biofuels, biogas
<administratively transferred to [Y02P 20/133](#) ADD>
- D Y02P 20/14 . . Reagents; Educts; Products
<administratively transferred to [Y02P 20/00](#) ADD>
- T Y02P 20/141 . . → Feedstock
- D Y02P 20/142 the feedstock being CO₂
<administratively transferred to [Y02P 20/141](#) ADD>
- T Y02P 20/143 . . → the feedstock being recycled material, e.g. plastics
- D Y02P 20/144 to generate syngas, i.e. H₂ + CO
<administratively transferred to [Y02P 20/143](#) ADD>
- M Y02P 20/145 . . → the feedstock being materials of biological origin
- D Y02P 20/146 . . . Changing the product type or product distribution
<administratively transferred to [Y02P 20/00](#) ADD>
- D Y02P 20/147 . . . Using materials efficiently
<administratively transferred to [Y02P 20/141](#) ADD>
- D Y02P 20/148 Recycling
<administratively transferred to [Y02P 20/143](#) ADD>

- D Y02P 20/149 Reduced process losses
<administratively transferred to [Y02P 20/141](#) ADD>
- D Y02P 20/15 Reduced transportation losses
<administratively transferred to [Y02P 20/141](#) ADD>
- T Y02P 20/151 . ~~---~~ Reduction of greenhouse gas [GHG] emissions, e.g. CO₂
- D Y02P 20/152 CO_2
<administratively transferred to [Y02P 20/151](#) ADD>
- D Y02P 20/153 N_2O
<administratively transferred to [Y02P 20/151](#) ADD>
- D Y02P 20/154 Halogenated hydrocarbons
<administratively transferred to [Y02P 20/151](#) ADD>
- M Y02P 20/155 . . ~~---~~ Perfluorocarbons [PFC]; Hydrofluorocarbons [HFC];
Hydrochlorofluorocarbons [HCFC]; Chlorofluorocarbons [CFC]
- M Y02P 20/156 . . ~~---~~ Methane [CH₄]
- T Y02P 20/20 . Improvements relating to chlorine production
- D Y02P 20/22 . . Optimization of Deacon process
<administratively transferred to [Y02P 20/20](#) ADD>
- D Y02P 20/224 . . . by process design
<administratively transferred to [Y02P 20/20](#) ADD>
- D Y02P 20/228 . . . by improving the materials, e.g. gauze composition or structure
<administratively transferred to [Y02P 20/20](#) ADD>
- T Y02P 20/30 . Improvements relating to adipic acid or caprolactam production
- D Y02P 20/32 . . Technologies aiming at reducing N_2O emissions
<administratively transferred to [Y02P 20/30](#) ADD>
- D Y02P 20/324 . . . by thermal destruction of N_2O
<administratively transferred to [Y02P 20/30](#) ADD>
- D Y02P 20/328 . . . by catalytic reduction of N_2O
<administratively transferred to [Y02P 20/30](#) ADD>
- T Y02P 20/40 . Improvements relating to *fluorochloro hydrocarbon, e.g. chlorodifluoromethane* [HCFC-22] production
- D Y02P 20/42 . . Reducing fluoroform [HFC-23] emissions
<administratively transferred to [Y02P 20/40](#) ADD>
- D Y02P 20/424 . . . by capture and subsequent thermal oxidation
<administratively transferred to [Y02P 20/40](#) ADD>
- T Y02P 20/50 . Improvements relating to the production of ~~products other than chlorine, adipic acid, caprolactam, or chlorodifluoromethane, e.g. bulk or fine chemicals or pharmaceuticals~~ *bulk chemicals*
- D Y02P 20/51 . . Bulk chemicals
<administratively transferred to [Y02P 20/50](#) ADD>
- D Y02P 20/514 . . . Aldehydes; Alcohols
<administratively transferred to [Y02P 20/50](#) ADD>
- D Y02P 20/518 . . . Hydrocyanation products, e.g. adipodinitrile
<administratively transferred to [Y02P 20/50](#) ADD>
- U Y02P 20/52 . . using catalysts, e.g. selective catalysts

- T Y02P 20/54
- • ~~characterised by the solvent~~ *using solvents, e.g. supercritical solvents or ionic liquids*
- D Y02P 20/542
- • • the solvent being an ionic liquid
<administratively transferred to [Y02P 20/54](#) ADD>
- D Y02P 20/544
- • • Supercritical solvents, e.g. supercritical H₂O or CO₂
<administratively transferred to [Y02P 20/54](#) ADD>
- D Y02P 20/546
- • • Mixtures of ionic liquids and supercritical solvents
<administratively transferred to [Y02P 20/54](#) ADD>
- M Y02P 20/55
- • ~~Synthetic design~~ *Design of synthesis routes*, e.g. reducing the use of auxiliary or protecting groups
- D Y02P 20/57
- • Efficient separation techniques
<administratively transferred to [Y02P 20/50](#) ADD>
- D Y02P 20/572
- • • Membranes
<administratively transferred to [Y02P 20/50](#) ADD>
- D Y02P 20/58
- • Recycling
<administratively transferred to [Y02P 20/50](#) ADD>
- M Y02P 20/582
- • • *Recycling* of unreacted starting or intermediate materials
- M Y02P 20/584
- • • *Recycling* of catalysts
- D Y02P 20/586
- • • of reagents, e.g. co-catalysts, adjuvants
<administratively transferred to [Y02P 20/50](#) ADD>
- D Y02P 20/588
- • • involving immobilised starting materials, reagents or catalysts
<administratively transferred to [Y02P 20/50](#) ADD>
- U Y02P 20/59
- • Biological synthesis; Biological purification
- T Y02P 30/00** **Technologies relating to oil refining and petrochemical industry**
- D Y02P 30/10
- Reduction of greenhouse gas [GHG] emissions during production processes
<administratively transferred to [Y02P 30/00](#) ADD>
- T Y02P 30/20
- ~~Bio~~ *using bio*-feedstock
- D Y02P 30/30
- Carbon capture or storage [CCS] specific to hydrogen production
<administratively transferred to [Y02P 30/00](#) ADD>
- T Y02P 30/40
- Ethylene production
- D Y02P 30/42
- • using bio-feedstock
<administratively transferred to [Y02P 30/20](#) ADD and [Y02P 30/40](#) ADD>
- D Y02P 30/44
- • Cracking, e.g. steam cracking
<administratively transferred to [Y02P 30/40](#) ADD>
- D Y02P 30/442
- • • Furnace or cracking tube materials, e.g. chemical composition of the tubes; Controlling or regulating the tube furnaces
<administratively transferred to [Y02P 30/40](#) ADD>
- D Y02P 30/444
- • • Cogeneration using furnace exhaust
<administratively transferred to [Y02P 30/40](#) ADD>
- D Y02P 30/446
- • • Catalytic cracking
<administratively transferred to [Y02P 30/40](#) ADD>
- D Y02P 30/46
- • Separation
<administratively transferred to [Y02P 30/40](#) ADD>

- D Y02P 30/462 . . . using low temperature distillation
<administratively transferred to [Y02P 30/40](#) ADD>
- D Y02P 30/464 . . . using absorption or adsorption techniques
<administratively transferred to [Y02P 30/40](#) ADD>
- D Y02P 30/48 . . Compression
<administratively transferred to [Y02P 30/40](#) ADD>
- T Y02P 40/00 Technologies relating to the processing of minerals**
- T Y02P 40/10 . Production of cement, *e.g. improving or optimising the production methods; Cement grinding*
- D Y02P 40/12 . . Clinker production
<administratively transferred to [Y02P 40/10](#) ADD>
- T Y02P 40/121 . . Energy efficiency measures, e.g. improving or optimising the production methods
- D Y02P 40/123 Integrated production plants
<administratively transferred to [Y02P 40/121](#) ADD>
- T Y02P 40/125 . . Fuels from renewable energy sources, *e.g. waste or biomass*
- D Y02P 40/126 Waste
<administratively transferred to [Y02P 40/125](#) ADD>
- D Y02P 40/128 Biomass
<administratively transferred to [Y02P 40/125](#) ADD>
- D Y02P 40/14 . . Reduction of clinker content in cement
<administratively transferred to [Y02P 40/10](#) ADD>
- D Y02P 40/141 . . . Blended cements
<administratively transferred to [Y02P 40/10](#) ADD>
- D Y02P 40/143 Clinker replacement by slag
<administratively transferred to [Y02P 40/10](#) ADD>
- D Y02P 40/145 Clinker replacement by combustion residues
<administratively transferred to [Y02P 40/10](#) ADD>
- D Y02P 40/146 Clinker replacement by ground limestone
<administratively transferred to [Y02P 40/10](#) ADD>
- D Y02P 40/148 . . . Belite cements
<administratively transferred to [Y02P 40/10](#) ADD>
- D Y02P 40/16 . . Non-limestone based cements, e.g. alkali-activated cements
<administratively transferred to [Y02P 40/10](#) ADD>
- D Y02P 40/165 . . . Geopolymers
<administratively transferred to [Y02P 40/10](#) ADD>
- U Y02P 40/18 . . Carbon capture and storage [CCS]
- D Y02P 40/20 . Cement grinding
<administratively transferred to [Y02P 40/10](#) ADD>
- D Y02P 40/30 . Manufacturing or processing of sand or stone
<administratively transferred to [Y02P 40/00](#) ADD>
- T Y02P 40/40 . Production or processing of lime, *e.g. limestone regeneration of lime in pulp and sugar mills*

- D Y02P 40/42
- Limestone calcination
<administratively transferred to [Y02P 40/40](#) ADD>
- D Y02P 40/44
- Regeneration of lime in pulp and sugar mills
<administratively transferred to [Y02P 40/40](#) ADD>
- U Y02P 40/45
- using fuels from renewable energy sources
- D Y02P 40/47
- Reduction of lime consumption, e.g. in sugar industry
<administratively transferred to [Y02P 40/40](#) ADD>
- D Y02P 40/49
- Limestone grinding
<administratively transferred to [Y02P 40/40](#) ADD>
- T Y02P 40/50
- Glass production, *e.g. reusing waste heat during processing or shaping*
- D Y02P 40/51
- Producing or shaping of glass
<administratively transferred to [Y02P 40/50](#) ADD>
- D Y02P 40/52
- Use of cullet or other waste
<administratively transferred to [Y02P 40/50](#) ADD>
- D Y02P 40/53
- Reusing waste heat during processing or shaping
<administratively transferred to [Y02P 40/50](#) ADD>
- D Y02P 40/535
- Regenerative heating
<administratively transferred to [Y02P 40/50](#) ADD>
- D Y02P 40/55
- Oxy-fuel
<administratively transferred to [Y02P 40/50](#) ADD>
- D Y02P 40/56
- Batch or cullet pre-heating
<administratively transferred to [Y02P 40/50](#) ADD>
- M Y02P 40/57
- *Reduction* *Improving the yield, e-g- reduction* of reject rates; *Improving the yield*
- D Y02P 40/58
- Fuels from renewable energy sources
<administratively transferred to [Y02P 40/50](#) ADD>
- D Y02P 40/59
- CO₂ capture, e.g. for large oxy-fuel furnaces
<administratively transferred to [Y02P 40/50](#) ADD>
- T Y02P 40/60
- Production of ceramic materials or ceramic elements, *e.g. substitution of clay or shale by alternative raw materials, e.g. ashes*
- D Y02P 40/61
- Manufacturing of materials for construction, e.g. beams, bricks or tiles
<administratively transferred to [Y02P 40/60](#) ADD>
- D Y02P 40/615
- Bricks made from lime and sand
<administratively transferred to [Y02P 40/60](#) ADD>
- D Y02P 40/63
- Improving processing, storage or transport systems
<administratively transferred to [Y02P 40/60](#) ADD>
- D Y02P 40/65
- Improving kilns
<administratively transferred to [Y02P 40/60](#) ADD>
- D Y02P 40/67
- Fuels from renewable energy sources
<administratively transferred to [Y02P 40/60](#) ADD>
- D Y02P 40/69
- Substitution of clay or shale by alternative raw materials, e.g. ashes
<administratively transferred to [Y02P 40/60](#) ADD>
- T Y02P 60/00 **Technologies relating to agriculture, livestock or agroalimentary industries**

- D Y02P 60/10
 - Agricultural machinery or equipment
<administratively transferred to [Y02P 60/00](#) ADD>
- T Y02P 60/12
 - ~~•~~ using renewable energies, e.g. solar water pumping
- D Y02P 60/122
 - • • for irrigation, e.g. solar water pumping
<administratively transferred to [Y02P 60/12](#) ADD>
- D Y02P 60/124
 - • • Collecting solar energy in greenhouses
<administratively transferred to [Y02P 60/12](#) ADD>
- T Y02P 60/14
 - ~~•~~ Measures for saving energy, e.g. in green houses
- D Y02P 60/141
 - • • in irrigation, i.e. motor control
<administratively transferred to [Y02P 60/14](#) ADD>
- D Y02P 60/142
 - • • Reduction of fuel consumption
<administratively transferred to [Y02P 60/14](#) ADD>
- D Y02P 60/144
 - • • Combined machines, e.g. seeder combined with fertilizers
<administratively transferred to [Y02P 60/14](#) ADD>
- D Y02P 60/146
 - • • in greenhouses
<administratively transferred to [Y02P 60/14](#) ADD>
- D Y02P 60/147
 - • • • Heating, ventilation or air conditioning
<administratively transferred to [Y02P 60/14](#) ADD>
- D Y02P 60/148
 - • • • Constructive measures, e.g. light structures or improved insulation
<administratively transferred to [Y02P 60/14](#) ADD>
- D Y02P 60/149
 - • • • Efficient lighting, e.g. LED lighting
<administratively transferred to [Y02P 60/14](#) ADD>
- D Y02P 60/15
 - • • in preparing or milling grain
<administratively transferred to [Y02P 60/14](#) ADD>
- D Y02P 60/16
 - • Machines for direct seeding, i.e. sod or grassland seeding
<administratively transferred to [Y02P 60/00](#) ADD>
- D Y02P 60/18
 - • Activities not otherwise provided for, e.g. storage
<administratively transferred to [Y02P 60/00](#) ADD>
- T Y02P 60/20
 - Reduction of greenhouse gas [GHG] emissions in agriculture, e.g. CO₂
- T Y02P 60/21
 - • *Dinitrogen oxide [N₂O], e.g. using aquaponics, hydroponics or efficiency measures*
- D Y02P 60/212
 - • • Reducing the use of fertilizers
<administratively transferred to [Y02P 60/21](#) ADD>
- D Y02P 60/214
 - • • • Efficient applying machines
<administratively transferred to [Y02P 60/21](#) ADD>
- D Y02P 60/215
 - • • • Efficient spraying methods
<administratively transferred to [Y02P 60/21](#) ADD>
- D Y02P 60/216
 - • • • Aquaponics or hydroponics
<administratively transferred to [Y02P 60/21](#) ADD>
- D Y02P 60/218
 - • • use of additives, e.g. nitrification inhibitors, biochar
<administratively transferred to [Y02P 60/21](#) ADD>
- T Y02P 60/22
 - • ~~Reducing methane~~ *Methane* [CH₄] emissions from agricultural lands, e.g. from rice paddies

- D Y02P 60/23
 - • Reduction of CO₂ emissions from biota and soils
<administratively transferred to [Y02P 60/20](#) ADD>
- D Y02P 60/24
 - • Enhancing carbon sequestration in biota and soils
<administratively transferred to [Y02P 60/20](#) ADD>
- D Y02P 60/242
 - • • Roof greening
<administratively transferred to [Y02P 60/20](#) ADD>
- D Y02P 60/244
 - • • Wall greening
<administratively transferred to [Y02P 60/20](#) ADD>
- D Y02P 60/246
 - • • Use of plant growth regulators to improve carbon dioxide up-take by crop plants
<administratively transferred to [Y02P 60/20](#) ADD>
- D Y02P 60/247
 - • • Plants with high carbon sequestration potential
<administratively transferred to [Y02P 60/20](#) ADD>
- D Y02P 60/25
 - • Biomass with low greenhouse gas [GHG] emissions
<administratively transferred to [Y02P 60/20](#) ADD>
- U Y02P 60/30
 - Land use policy measures
- U Y02P 60/40
 - Afforestation or reforestation
- T Y02P 60/50
 - Livestock or poultry management
- T Y02P 60/52
 - • use of renewable energies
- D Y02P 60/521
 - • • Solar lighting, e.g. for poultry
<administratively transferred to [Y02P 60/52](#) ADD>
- D Y02P 60/524
 - • • for pumping or supplying water to livestock
<administratively transferred to [Y02P 60/52](#) ADD>
- D Y02P 60/526
 - • • for electric energy supply
<administratively transferred to [Y02P 60/52](#) ADD>
- D Y02P 60/528
 - • • • for electric livestock fences
<administratively transferred to [Y02P 60/52](#) ADD>
- D Y02P 60/54
 - • Environmental control in livestock or poultry housing
<administratively transferred to [Y02P 60/50](#) ADD>
- D Y02P 60/542
 - • • using renewable energy
<administratively transferred to [Y02P 60/12](#) ADD>
- D Y02P 60/56
 - • Methane [CH₄] capture
<administratively transferred to [Y02P 60/22](#) ADD>
- T Y02P 60/60
 - Fishing; *Aquaculture; Aquafarming*
- D Y02P 60/62
 - • Fishing equipment
<administratively transferred to [Y02P 60/60](#) ADD>
- D Y02P 60/64
 - • Aquaculture; Aquafarming
<administratively transferred to [Y02P 60/60](#) ADD>
- D Y02P 60/642
 - • • combined with aquaponics or hydroponics
<administratively transferred to [Y02P 60/60](#) ADD>
- D Y02P 60/70
 - Apiculture
<administratively transferred to [Y02P 60/00](#) ADD>
- T Y02P 60/80
 - Food processing, *e.g. use of renewable energies or variable speed drives in handling, conveying or stacking*

- D Y02P 60/81
- • Use of renewable energies or variable speed drives in handling, conveying or stacking
 - <administratively transferred to [Y02P 60/12](#) ADD>
- D Y02P 60/83
- • Warming or cooking
 - <administratively transferred to [Y02P 60/80](#) ADD>
- D Y02P 60/831
- • • using steam
 - <administratively transferred to [Y02P 60/80](#) ADD>
- D Y02P 60/833
- • • using microwave ovens
 - <administratively transferred to [Y02P 60/80](#) ADD>
- D Y02P 60/835
- • • by boiling
 - <administratively transferred to [Y02P 60/80](#) ADD>
- T Y02P 60/85
- • Food storage or conservation, *e.g. cooling or drying*
- D Y02P 60/851
- • • Cooling, refrigeration or freezing
 - <administratively transferred to [Y02P 60/85](#) ADD>
- D Y02P 60/853
- • • Drying
 - <administratively transferred to [Y02P 60/85](#) ADD>
- D Y02P 60/855
- • • Ice production, e.g. for conservation purposes
 - <administratively transferred to [Y02P 60/85](#) ADD>
- T Y02P 60/87
- • Re-use of by-products of food processing for fodder production
- D Y02P 60/871
- • • from molasses
 - <administratively transferred to [Y02P 60/87](#) ADD>
- D Y02P 60/873
- • • from distillers' or brewers' waste
 - <administratively transferred to [Y02P 60/87](#) ADD>
- D Y02P 60/875
- • • from waste products of dairy plants
 - <administratively transferred to [Y02P 60/87](#) ADD>
- D Y02P 60/877
- • • from by-products of vegetal origin
 - <administratively transferred to [Y02P 60/87](#) ADD>
- D Y02P 60/89
- • characterised by the product
 - <administratively transferred to [Y02P 60/87](#) ADD>
- D Y02P 60/891
- • • Dairy products
 - <administratively transferred to [Y02P 60/87](#) ADD>
- U Y02P 70/00**
- Climate change mitigation technologies in the production process for final industrial or consumer products**
- T Y02P 70/10
- Greenhouse gas [GHG] capture, material saving, heat recovery or other energy efficient measures, e.g. motor control, characterised by manufacturing processes, *e.g. for rolling metal or metal working*
- D Y02P 70/12
- • related technologies for improving processes or machines for shaping products
 - <administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/121
- • • Machines for rolling metal, e.g. rolling mills
 - <administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/123
- • • • Motor control
 - <administratively transferred to [Y02P 70/10](#) ADD>

- D Y02P 70/125 Removing fumes from rolling mills
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/127 using heat shields
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/129 Heat recovery during rolling
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/131 using liquid recovering devices
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/133 for recovering coolants
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/135 for recovering lubricants
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/137 . . . relating to forging, hammering, pressing or riveting
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/139 . . . relating to the manufacture or working of metal sheets or profiles
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/141 . . . relating to pressing processes or machines therefore
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/143 Optimisation of energy consumption
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/145 by control of drive motors
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/16 . . . related technologies for metal working by removing or adding material
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/161 . . . Power management, e.g. limiting power to tools
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/163 . . . Power down for energy saving
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/167 . . . relating to the design or operation of machining centres or machine tools
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/169 using minimal quantities of coolants or lubricants
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/171 Devices or processes for removing and reusing chips
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/173 Machine centres provided for turning, boring or milling
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/175 . . . relating to the design or operation of machines for dry cutting gears or toothed racks
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/177 . . . Grinding or polishing
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/179 Treatment of used abrasive materials aiming at a further reuse
<administratively transferred to [Y02P 70/10](#) ADD>

- D Y02P 70/181 . . . relating to the design or operation of machines for soldering, welding or cutting by applying heat locally
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/183 . . . relating to the design or operation of machines for machines for sawing, cutting, perforating, punching or severing
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/185 . . . relating to the operation of machines combining different processes for working of metal
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/187 . . . relating to the design or operation of machines for working metal not otherwise provided for
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/20 . . . related technologies for printing, lining or stamping machines
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/22 . . . Technologies for working on wood, veneer or plywood
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/24 . . . related technologies for saving energy and raw materials during the production of paper or paper articles
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/26 . . . related technologies for working on or processing of plastics
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/261 . . . recovering energy or power from drive motors in injection moulding
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/263 . . . recovering energy or reusing materials in extrusion moulding
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/265 . . . relating to blow moulding
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/267 Means for recycling or reusing auxiliaries or materials
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/269 reducing blowing fluid consumption
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/271 by recycling blow fluid
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/273 recycling reactive gas
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/275 reusing heat
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/277 . . . relating to thermoforming
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/279 Recycling or reuse of materials
<administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/281 Reuse of pressure or vacuum
<administratively transferred to [Y02P 70/10](#) ADD>

- D Y02P 70/30
- • related to technologies for conveying, packing or storing of goods or handling thin or filamentary material
 - <administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/32
- • relating to mixing
 - <administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/34
- • relating to separation, flotation or differential sedimentation
 - <administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/36
- • Recycling or reuse of a liquid sprayed or atomised
 - <administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/38
- • Apparatus or processes for applying liquids or other fluent materials
 - <administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/40
- • Drying by removing liquid
 - <administratively transferred to [Y02P 70/10](#) ADD>
- D Y02P 70/405
- • • Drying with heating arrangements using waste heat
 - <administratively transferred to [Y02P 70/10](#) ADD>
- T Y02P 70/50
- Manufacturing or production processes characterised by the final manufactured product
- D Y02P 70/52
- • Manufacturing of products or systems for producing renewable energy
 - <administratively transferred to [Y02P 70/50](#) ADD>
- D Y02P 70/521
- • • Photovoltaic generators
 - <administratively transferred to [Y02P 70/50](#) ADD>
- D Y02P 70/523
- • • Wind turbines
 - <administratively transferred to [Y02P 70/50](#) ADD>
- D Y02P 70/525
- • • Hydropower turbines
 - <administratively transferred to [Y02P 70/50](#) ADD>
- D Y02P 70/527
- • • • for tidal streams or dam-less hydropower, e.g. sea flood and ebb or stream current
 - <administratively transferred to [Y02P 70/50](#) ADD>
- D Y02P 70/54
- • Manufacturing of lithium-ion, lead-acid or alkaline secondary batteries
 - <administratively transferred to [Y02P 70/50](#) ADD>
- D Y02P 70/56
- • Manufacturing of fuel cells
 - <administratively transferred to [Y02P 70/50](#) ADD>
- D Y02P 70/58
- • Greenhouse gas [GHG] capture, heat recovery or other energy efficient measures relating to manufacturing or assembling of vehicles, e.g. motor control
 - <administratively transferred to [Y02P 70/50](#) ADD>
- D Y02P 70/585
- • • Aircraft Eco design, i.e. taking into account the full life cycle of the aircraft including re-use, recyclability and disposal
 - <administratively transferred to [Y02P 70/50](#) ADD>
- D Y02P 70/60
- • Greenhouse gas [GHG] capture, heat recovery or other energy efficient measures relating to production or assembly of electric or electronic components or products, e.g. motor control
 - <administratively transferred to [Y02P 70/50](#) ADD>

- D Y02P 70/601 . . . the product being a basic electric component or element, i.e. cables, resistors, capacitors, switches, connectors, relays or protections
<administratively transferred to [Y02P 70/50](#) ADD>
- D Y02P 70/603 . . . the product being a lighting component
<administratively transferred to [Y02P 70/50](#) ADD>
- D Y02P 70/605 . . . the product being a semiconductor or solid state device or parts thereof
<administratively transferred to [Y02P 70/50](#) ADD>
- D Y02P 70/607 . . . Manufacturing of electronic silicon-based components
<administratively transferred to [Y02P 70/50](#) ADD>
- D Y02P 70/609 . . . the product being a dynamo-electric machine, i.e. electrical generators or motors
<administratively transferred to [Y02P 70/50](#) ADD>
- D Y02P 70/611 . . . the product being a printed circuit board [PCB]
<administratively transferred to [Y02P 70/50](#) ADD>
- D Y02P 70/613 . . . involving the assembly of several electronic elements
<administratively transferred to [Y02P 70/50](#) ADD>
- T Y02P 70/62 . . related technologies for production or treatment of textile or flexible materials or products thereof, including footwear
- D Y02P 70/621 . . . Production or treatment of artificial filaments or the like
<administratively transferred to [Y02P 70/62](#) ADD>
- D Y02P 70/623 . . . Energy efficient measures, e.g. motor control or heat recovery
<administratively transferred to [Y02P 70/62](#) ADD>
- D Y02P 70/625 . . . Recovery of starting material, waste material or solvents during the manufacturing process
<administratively transferred to [Y02P 70/62](#) ADD>
- D Y02P 70/627 . . . of cellulose, cellulose derivatives or proteins
<administratively transferred to [Y02P 70/62](#) ADD>
- D Y02P 70/629 . . . of synthetic polymers
<administratively transferred to [Y02P 70/62](#) ADD>
- D Y02P 70/631 . . . Production or treatment of lace, e.g. knitting or braiding
<administratively transferred to [Y02P 70/62](#) ADD>
- D Y02P 70/633 . . . Saving materials
<administratively transferred to [Y02P 70/62](#) ADD>
- D Y02P 70/635 . . . Saving energy by reducing inertia of moving parts
<administratively transferred to [Y02P 70/62](#) ADD>
- D Y02P 70/637 . . . Treatment of textiles
<administratively transferred to [Y02P 70/62](#) ADD>
- D Y02P 70/639 . . . Energy efficient measures, e.g. motor control or heat recovery
<administratively transferred to [Y02P 70/62](#) ADD>
- D Y02P 70/641 . . . Recovery of solvents
<administratively transferred to [Y02P 70/62](#) ADD>
- D Y02P 70/643 . . . Treatment of textiles using a short bath ratio
<administratively transferred to [Y02P 70/62](#) ADD>

- D Y02P 70/645 . . . Manufacturing of wall or floor covering materials or the like
<administratively transferred to [Y02P 70/62](#) ADD>
- D Y02P 70/647 Energy efficient measures, e.g. motor control or heat recovery
<administratively transferred to [Y02P 70/62](#) ADD>
- D Y02P 70/649 using scraps or recycled materials
<administratively transferred to [Y02P 70/62](#) ADD>
- D Y02P 70/651 the materials being particles
<administratively transferred to [Y02P 70/62](#) ADD>
- D Y02P 70/653 . . . Footwear made at least partially of recyclable material
<administratively transferred to [Y02P 70/62](#) ADD>
- D Y02P 70/66 . . Greenhouse gas [GHG] capture, use of renewable energies, heat recovery or other energy efficient measures for manufacturing or preparation of tobacco products, e.g. motor control
<administratively transferred to [Y02P 70/50](#) ADD>
- U Y02P 80/00 Climate change mitigation technologies for sector-wide applications**
- T Y02P 80/10 . Efficient use of energy, *e.g. using compressed air or pressurized fluid as energy carrier*
- D Y02P 80/11 . . of electric energy
<administratively transferred to [Y02P 80/10](#) ADD>
- D Y02P 80/112 . . . Power supplies with power electronics for efficient use of energy, e.g. power factor correction [PFC] or resonant converters
<administratively transferred to [Y02P 80/10](#) ADD>
- D Y02P 80/114 . . . Control systems or methods for efficient use of energy
<administratively transferred to [Y02P 80/10](#) ADD>
- D Y02P 80/116 Electronic drive motor controls
<administratively transferred to [Y02P 80/10](#) ADD>
- D Y02P 80/12 . . using compressed air as energy carrier, e.g. for pneumatic systems
<administratively transferred to [Y02P 80/10](#) ADD>
- D Y02P 80/13 . . using pressurized fluid as energy carrier, e.g. for hydraulic systems
<administratively transferred to [Y02P 80/10](#) ADD>
- U Y02P 80/14 . . District level solutions, i.e. local energy networks
- T Y02P 80/15 . . On-site combined power, heat or cool generation or distribution, e.g. combined heat and power [CHP] supply
- D Y02P 80/152 . . . for heat recovery
<administratively transferred to [Y02P 80/15](#) ADD>
- D Y02P 80/154 . . . for steam generation or distribution
<administratively transferred to [Y02P 80/15](#) ADD>
- D Y02P 80/156 . . in fluid distribution systems
<administratively transferred to [Y02P 80/10](#) ADD>
- D Y02P 80/158 . . . Solar or wind-powered water pumping not specially adapted for irrigation
<administratively transferred to [Y02P 80/10](#) ADD>
- T Y02P 80/20 . **Sector-wide applications** using renewable energy
- D Y02P 80/21 . . Biomass as fuel
<administratively transferred to [Y02P 80/20](#) ADD>

- D Y02P 80/22
 - • Wind-energy
 - <administratively transferred to [Y02P 80/20](#) ADD>
- D Y02P 80/23
 - • Solar-energy
 - <administratively transferred to [Y02P 80/20](#) ADD>
- D Y02P 80/24
 - • • Solar thermal-energy
 - <administratively transferred to [Y02P 80/20](#) ADD>
- D Y02P 80/25
 - • • Photovoltaic-energy
 - <administratively transferred to [Y02P 80/20](#) ADD>
- U Y02P 80/30
 - Reducing waste in manufacturing processes; Calculations of released waste quantities
- U Y02P 80/40
 - Minimising material used in manufacturing processes
- U Y02P 90/00**

Enabling technologies with a potential contribution to greenhouse gas [GHG] emissions mitigation
- T Y02P 90/02
 - Total factory control, e.g. smart factories, flexible manufacturing systems [FMS] or integrated manufacturing systems [IMS]
- D Y02P 90/04
 - • characterised by the assembly processes
 - <administratively transferred to [Y02P 90/02](#) ADD>
- D Y02P 90/06
 - • characterised by direct numerical control [DNC]
 - <administratively transferred to [Y02P 90/02](#) ADD>
- D Y02P 90/08
 - • characterised by the cooperation between machine tools, manipulators or work piece supply systems
 - <administratively transferred to [Y02P 90/02](#) ADD>
- D Y02P 90/083
 - • • Manipulators cooperating with conveyors
 - <administratively transferred to [Y02P 90/02](#) ADD>
- D Y02P 90/087
 - • • Manipulators cooperating with machine tools
 - <administratively transferred to [Y02P 90/02](#) ADD>
- D Y02P 90/10
 - • characterised by identification, e.g. of work pieces or equipment
 - <administratively transferred to [Y02P 90/02](#) ADD>
- D Y02P 90/12
 - • characterised by programme execution
 - <administratively transferred to [Y02P 90/02](#) ADD>
- D Y02P 90/14
 - • characterised by fault tolerance, reliability of production system
 - <administratively transferred to [Y02P 90/02](#) ADD>
- D Y02P 90/16
 - • characterised by system universality, i.e. configurability or modularity of production units
 - <administratively transferred to [Y02P 90/02](#) ADD>
- D Y02P 90/18
 - • characterised by the network communication
 - <administratively transferred to [Y02P 90/02](#) ADD>
- D Y02P 90/185
 - • • using local area networks [LAN]
 - <administratively transferred to [Y02P 90/02](#) ADD>
- D Y02P 90/20
 - • characterised by job scheduling, process planning or material flow
 - <administratively transferred to [Y02P 90/02](#) ADD>
- D Y02P 90/205
 - • • Tool management
 - <administratively transferred to [Y02P 90/02](#) ADD>

- D Y02P 90/22
 - • characterised by quality surveillance of production
 - <administratively transferred to [Y02P 90/02](#) ADD>
- D Y02P 90/24
 - • characterised by computer integrated manufacturing [CIM], planning or realisation
 - <administratively transferred to [Y02P 90/02](#) ADD>
- D Y02P 90/26
 - • characterised by modelling or simulation of the manufacturing system
 - <administratively transferred to [Y02P 90/02](#) ADD>
- D Y02P 90/265
 - • • Product design therefor
 - <administratively transferred to [Y02P 90/02](#) ADD>
- D Y02P 90/28
 - • characterised by transport systems
 - <administratively transferred to [Y02P 90/02](#) ADD>
- D Y02P 90/285
 - • • using automatic guided vehicles [AGV]
 - <administratively transferred to [Y02P 90/02](#) ADD>
- U Y02P 90/30
 - Computing systems specially adapted for manufacturing
- U Y02P 90/40
 - Fuel cell technologies in production processes
- U Y02P 90/45
 - Hydrogen technologies in production processes
- U Y02P 90/50
 - Energy storage in industry with an added climate change mitigation effect
- U Y02P 90/60
 - Electric or hybrid propulsion means for production processes
- U Y02P 90/70
 - Combining sequestration of CO₂ and exploitation of hydrocarbons by injecting CO₂ or carbonated water in oil wells
- T Y02P 90/80
 - Management or planning
- U Y02P 90/82
 - • Energy audits or management systems therefor
- U Y02P 90/84
 - • Greenhouse gas [GHG] management systems
- U Y02P 90/845
 - • • Inventory and reporting systems for greenhouse gases [GHG]
- D Y02P 90/86
 - • Maintenance planning
 - <administratively transferred to [Y02P 90/80](#) ADD>
- U Y02P 90/90
 - Financial instruments for climate change mitigation, e.g. environmental taxes, subsidies or financing
- U Y02P 90/95
 - • CO₂ emission certificates or credits trading

Project: RP0678 (Y02T)

- U Y02T 10/00 Road transport of goods or passengers**
- U Y02T 10/10
 - Internal combustion engine [ICE] based vehicles
- T Y02T 10/12
 - • ~~Technologies for the improvement of indicated efficiency of a conventional ICE~~ *Improving ICE efficiencies*
- D Y02T 10/121
 - • • Adding non-fuel substances or small quantities of secondary fuel to fuel, air or fuel/air mixture
 - <administratively transferred to [Y02T 10/12](#) ADD>
- D Y02T 10/123
 - • • Fuel injection
 - <administratively transferred to [Y02T 10/12](#) ADD>
- D Y02T 10/125
 - • • Combustion chambers and charge mixing enhancing inside the combustion chamber
 - <administratively transferred to [Y02T 10/12](#) ADD>

- D Y02T 10/126
- • • Acting upon fuel or oxidizing compound, e.g. pre-treatment by catalysts, ultrasound or electricity
- <administratively transferred to [Y02T 10/12](#) ADD>
- D Y02T 10/128
- • • Methods of operating, e.g. homogeneous charge compression ignition [HCCI], premixed charge compression ignition [PCCI]
- <administratively transferred to [Y02T 10/12](#) ADD>
- D Y02T 10/14
- • Technologies for the improvement of mechanical efficiency of a conventional ICE
- <administratively transferred to [Y02T 10/12](#) ADD>
- D Y02T 10/142
- • • Methods of operating, e.g. Atkinson cycle, Ericsson
- <administratively transferred to [Y02T 10/12](#) ADD>
- D Y02T 10/144
- • • Non-naturally aspirated engines, e.g. turbocharging, supercharging
- <administratively transferred to [Y02T 10/12](#) ADD>
- D Y02T 10/146
- • • Charge mixing enhancing outside the combustion chamber
- <administratively transferred to [Y02T 10/12](#) ADD>
- D Y02T 10/148
- • • Downsizing or downspeeding
- <administratively transferred to [Y02T 10/12](#) ADD>
- D Y02T 10/16
- • Energy recuperation from low temperature heat sources of the ICE to produce additional power
- <administratively transferred to [Y02T 10/12](#) ADD>
- D Y02T 10/163
- • • Turbocompound engines
- <administratively transferred to [Y02T 10/12](#) ADD>
- D Y02T 10/166
- • • Waste heat recovering cycles or thermoelectric systems
- <administratively transferred to [Y02T 10/12](#) ADD>
- D Y02T 10/17
- • Non-reciprocating piston engines, e.g. rotating motors
- <administratively transferred to [Y02T 10/12](#) ADD>
- D Y02T 10/18
- • Varying inlet or exhaust valve operating characteristics
- <administratively transferred to [Y02T 10/12](#) ADD>
- D Y02T 10/20
- • Exhaust after-treatment
- <administratively transferred to [Y02T 10/12](#) ADD>
- D Y02T 10/22
- • • Three-way catalyst technology, i.e. oxidation or reduction at stoichiometric equivalence ratio
- <administratively transferred to [Y02T 10/12](#) ADD>
- D Y02T 10/24
- • • Selective Catalytic Reactors for reduction in oxygen-rich atmosphere
- <administratively transferred to [Y02T 10/12](#) ADD>
- D Y02T 10/26
- • • Thermal conditioning of exhaust after-treatment
- <administratively transferred to [Y02T 10/12](#) ADD>
- T Y02T 10/30
- • Use of alternative fuels, e.g. *biofuels*
- D Y02T 10/32
- • • Gaseous fuels
- <administratively transferred to [Y02T 10/30](#) ADD>
- D Y02T 10/34
- • • Non-gaseous fuels
- <administratively transferred to [Y02T 10/30](#) ADD>
- D Y02T 10/36
- • • Multiple fuels, e.g. multi-fuel engines
- <administratively transferred to [Y02T 10/30](#) ADD>

- T Y02T 10/40
 - • Engine management systems
- D Y02T 10/42
 - • • controlling air supply
 - <administratively transferred to [Y02T 10/40](#) ADD>
- D Y02T 10/44
 - • • controlling fuel supply
 - <administratively transferred to [Y02T 10/40](#) ADD>
- D Y02T 10/46
 - • • controlling ignition
 - <administratively transferred to [Y02T 10/40](#) ADD>
- D Y02T 10/47
 - • • Exhaust feedback
 - <administratively transferred to [Y02T 10/40](#) ADD>
- D Y02T 10/48
 - • • Switching off the internal combustion engine, e.g. stop and go
 - <administratively transferred to [Y02T 10/40](#) ADD>
- D Y02T 10/50
 - • Intelligent control systems, e.g. conjoint control
 - <administratively transferred to [Y02T 10/40](#) ADD>
- D Y02T 10/52
 - • • relating to internal combustion engine fuel consumption
 - <administratively transferred to [Y02T 10/40](#) ADD>
- D Y02T 10/54
 - • • relating to internal combustion engine emissions
 - <administratively transferred to [Y02T 10/40](#) ADD>
- D Y02T 10/56
 - • • Optimising drivetrain operating point
 - <administratively transferred to [Y02T 10/40](#) ADD>
- T Y02T 10/60
 - Other road transportation technologies with climate change mitigation effect
- T Y02T 10/62
 - • Hybrid vehicles
- D Y02T 10/6204
 - • • using ICE and mechanical energy storage, e.g. flywheel (mechanical storage units for electromobility in general Y02T 10/7027)
 - <administratively transferred to [Y02T 10/62](#) ADD>
- D Y02T 10/6208
 - • • using ICE and fluidic energy storage, e.g. pressure accumulator
 - <administratively transferred to [Y02T 10/62](#) ADD>
- D Y02T 10/6213
 - • • using ICE and electric energy storage, i.e. battery, capacitor (battery for energy storage for electromobility in general Y02T 10/7005; capacitor technology for energy storage for electromobility in general Y02T 10/7022)
 - <administratively transferred to [Y02T 10/62](#) ADD>
- D Y02T 10/6217
 - • • • of the series type or range extenders
 - <administratively transferred to [Y02T 10/62](#) ADD>
- D Y02T 10/6221
 - • • • of the parallel type
 - <administratively transferred to [Y02T 10/62](#) ADD>
- D Y02T 10/6226
 - • • • • Motor-assist type
 - <administratively transferred to [Y02T 10/62](#) ADD>
- D Y02T 10/623
 - • • • of the series-parallel type
 - <administratively transferred to [Y02T 10/62](#) ADD>
- D Y02T 10/6234
 - • • • • Series-parallel switching type
 - <administratively transferred to [Y02T 10/62](#) ADD>
- D Y02T 10/6239
 - • • • • Differential gearing distribution type
 - <administratively transferred to [Y02T 10/62](#) ADD>
- D Y02T 10/6243
 - • • • • Electrical distribution type
 - <administratively transferred to [Y02T 10/62](#) ADD>

- D Y02T 10/6247 with motor integrated into gearbox
<administratively transferred to [Y02T 10/62](#) ADD>
- D Y02T 10/6252 connected or connectable to input shaft of gearing
<administratively transferred to [Y02T 10/62](#) ADD>
- D Y02T 10/6256 connected or connectable to intermediate shaft of gearing
<administratively transferred to [Y02T 10/62](#) ADD>
- D Y02T 10/626 Motor between output shaft of gearing and driven wheels
<administratively transferred to [Y02T 10/62](#) ADD>
- D Y02T 10/6265 Driving a plurality of axles
<administratively transferred to [Y02T 10/62](#) ADD>
- D Y02T 10/6269 provided with means for plug-in
<administratively transferred to [Y02T 10/62](#) ADD>
- D Y02T 10/6273 . . . Combining different types of energy storage
<administratively transferred to [Y02T 10/62](#) ADD>
- D Y02T 10/6278 Battery and capacitor
<administratively transferred to [Y02T 10/62](#) ADD>
- D Y02T 10/6282 Battery and mechanical or fluidic energy storage
<administratively transferred to [Y02T 10/62](#) ADD>
- D Y02T 10/6286 . . . Control systems for power distribution between ICE and other motor or motors
<administratively transferred to [Y02T 10/62](#) ADD>
- D Y02T 10/6291 Predicting future driving conditions
<administratively transferred to [Y02T 10/62](#) ADD>
- D Y02T 10/6295 . . . Other types of combustion engine
<administratively transferred to [Y02T 10/62](#) ADD>
- T Y02T 10/64 . . Electric machine technologies **for applications in electromobility** *in electromobility*
- D Y02T 10/641 . . . characterised by aspects of the electric machine
<administratively transferred to [Y02T 10/64](#) ADD>
- D Y02T 10/642 . . . Control strategies of electric machines for automotive applications
<administratively transferred to [Y02T 10/64](#) ADD>
- D Y02T 10/643 Vector control
<administratively transferred to [Y02T 10/64](#) ADD>
- D Y02T 10/644 Control strategies for ac machines other than vector control
<administratively transferred to [Y02T 10/64](#) ADD>
- D Y02T 10/645 Control strategies for dc machines
<administratively transferred to [Y02T 10/64](#) ADD>
- D Y02T 10/646 With two or more electric drive machines
<administratively transferred to [Y02T 10/64](#) ADD>
- T Y02T 10/70 . . Energy storage **for electromobility systems for electromobility, e.g. batteries (hydrogen internal combustion engines Y02T 90/42; fuel cell powered electric vehicles Y02T 90/34)**
- D Y02T 10/7005 . . . Batteries
<administratively transferred to [Y02T 10/70](#) ADD>

- D Y02T 10/7011 Lithium-ion battery
<administratively transferred to [Y02T 10/70](#) ADD>
- D Y02T 10/7016 Lead-acid battery
<administratively transferred to [Y02T 10/70](#) ADD>
- D Y02T 10/7022 . . . Capacitors, supercapacitors or ultracapacitors
<administratively transferred to [Y02T 10/70](#) ADD>
- D Y02T 10/7027 . . . Mechanical energy storage devices
<administratively transferred to [Y02T 10/70](#) ADD>
- D Y02T 10/7033 Fly wheels
<administratively transferred to [Y02T 10/70](#) ADD>
- D Y02T 10/7038 . . . Energy storage management
<administratively transferred to [Y02T 10/70](#) ADD>
- D Y02T 10/7044 Controlling the battery or capacitor state of charge
<administratively transferred to [Y02T 10/70](#) ADD>
- D Y02T 10/705 Controlling vehicles with one battery or one capacitor only
<administratively transferred to [Y02T 10/70](#) ADD>
- D Y02T 10/7055 Controlling vehicles with more than one battery or more than one capacitor
<administratively transferred to [Y02T 10/70](#) ADD>
- D Y02T 10/7061 the batteries or capacitors being of the same voltage
<administratively transferred to [Y02T 10/70](#) ADD>
- D Y02T 10/7066 the batteries or capacitors being of a different voltage
<administratively transferred to [Y02T 10/70](#) ADD>
- T Y02T 10/7072 . . . Electromobility specific charging systems or methods for batteries, ultracapacitors, supercapacitors or double-layer capacitors (~~efficient charging systems for batteries, ultracapacitors, supercapacitors or double-layer capacitors in road transportation in general Y02T 10/92~~)
- D Y02T 10/7077 on-board the vehicle
<administratively transferred to [Y02T 10/7072](#) ADD>
- D Y02T 10/7083 with the energy being of renewable origin
<administratively transferred to [Y02T 10/7072](#) ADD>
- D Y02T 10/7088 Charging stations
<administratively transferred to [Y02T 10/7072](#) ADD>
- D Y02T 10/7094 with the energy being of renewable origin
<administratively transferred to [Y02T 10/7072](#) ADD>
- T Y02T 10/72 . . . Electric energy management in electromobility
- D Y02T 10/7208 . . . Electric power conversion within the vehicle
<administratively transferred to [Y02T 10/72](#) ADD>
- D Y02T 10/7216 DC to DC power conversion
<administratively transferred to [Y02T 10/72](#) ADD>
- D Y02T 10/7225 Using step-up or boost converters
<administratively transferred to [Y02T 10/72](#) ADD>
- D Y02T 10/7233 Using step-down or buck converters
<administratively transferred to [Y02T 10/72](#) ADD>

- D Y02T 10/7241 DC to AC or AC to DC power conversion
<administratively transferred to [Y02T 10/72](#) ADD>
- D Y02T 10/725 AC to AC power conversion
<administratively transferred to [Y02T 10/72](#) ADD>
- D Y02T 10/7258 . . . Optimisation of vehicle performance
<administratively transferred to [Y02T 10/72](#) ADD>
- D Y02T 10/7275 Desired performance achievement
<administratively transferred to [Y02T 10/72](#) ADD>
- D Y02T 10/7283 Optimisation of energy management
<administratively transferred to [Y02T 10/72](#) ADD>
- D Y02T 10/7291 by route optimisation processing
<administratively transferred to [Y02T 10/72](#) ADD>
- D Y02T 10/76 . . Transmission of mechanical power
<administratively transferred to [Y02T 10/60](#) ADD>
- U Y02T 10/80 . Technologies aiming to reduce greenhouse gasses emissions common to all road transportation technologies
- U Y02T 10/82 . . Elements for improving aerodynamics
- U Y02T 10/84 . . Data processing systems or methods, management, administration
- T Y02T 10/86 . . Optimisation of rolling resistance, e.g. weight reduction
- D Y02T 10/862 . . . Tyres, e.g. materials
<administratively transferred to [Y02T 10/86](#) ADD>
- D Y02T 10/865 . . . Bearings
<administratively transferred to [Y02T 10/86](#) ADD>
- U Y02T 10/88 . . Optimized components or subsystems, e.g. lighting, actively controlled glasses
- U Y02T 10/90 . . Energy harvesting concepts as power supply for auxiliaries' energy consumption, e.g. photovoltaic sun-roof
- U Y02T 10/92 . . Energy efficient charging or discharging systems for batteries, ultracapacitors, supercapacitors or double-layer capacitors specially adapted for vehicles
- T Y02T 30/00 Transportation of goods or passengers via railways, e.g. energy recovery or reducing air resistance**
- D Y02T 30/10 . Energy recovery technologies concerning the propulsion system in locomotives or motor railcars
<administratively transferred to [Y02T 30/00](#) ADD>
- D Y02T 30/12 . . In electric locomotives or motor railcars with electric accumulators, e.g. involving regenerative braking
<administratively transferred to [Y02T 30/00](#) ADD>
- D Y02T 30/14 . . In locomotives or motor railcars with pneumatic accumulators
<administratively transferred to [Y02T 30/00](#) ADD>
- D Y02T 30/16 . . In locomotives or motor railcars with two or different kinds or types of engine
<administratively transferred to [Y02T 30/00](#) ADD>
- D Y02T 30/18 . . Specific power storing devices
<administratively transferred to [Y02T 30/00](#) ADD>
- D Y02T 30/30 . Other technological aspects of railway vehicles
<administratively transferred to [Y02T 30/00](#) ADD>

- D Y02T 30/32
 - • Reducing air resistance by modifying contour
<administratively transferred to [Y02T 30/00](#) ADD>
- D Y02T 30/34
 - • Composite; Lightweight materials
<administratively transferred to [Y02T 30/00](#) ADD>
- D Y02T 30/36
 - • Device for using the energy of the movements of the vehicle
<administratively transferred to [Y02T 30/00](#) ADD>
- D Y02T 30/38
 - • Bogie frames comprising parts made from fiber-reinforced matrix material
<administratively transferred to [Y02T 30/00](#) ADD>
- D Y02T 30/40
 - • Applications of solar cells or heat pipes, e.g. on ski-lift cabins or carriages for passengers or goods
<administratively transferred to [Y02T 30/00](#) ADD>
- D Y02T 30/42
 - • concerning heating, ventilating or air conditioning
<administratively transferred to [Y02T 30/00](#) ADD>
- U Y02T 50/00 Aeronautics or air transport**
- T Y02T 50/10
 - Drag reduction
- D Y02T 50/12
 - • Overall configuration, shape or profile of fuselage or wings
<administratively transferred to [Y02T 50/10](#) ADD>
- D Y02T 50/14
 - • Adaptive structures, e.g. morphing wings
<administratively transferred to [Y02T 50/10](#) ADD>
- D Y02T 50/16
 - • by influencing airflow
<administratively transferred to [Y02T 50/10](#) ADD>
- D Y02T 50/162
 - • • by generating or controlling vortexes
<administratively transferred to [Y02T 50/10](#) ADD>
- D Y02T 50/164
 - • • • at the wing tip, e.g. winglets
<administratively transferred to [Y02T 50/10](#) ADD>
- D Y02T 50/166
 - • • by influencing the boundary layer
<administratively transferred to [Y02T 50/10](#) ADD>
- T Y02T 50/30
 - Wing lift efficiency
- D Y02T 50/32
 - • Optimised high lift wing systems
<administratively transferred to [Y02T 50/30](#) ADD>
- D Y02T 50/34
 - • Helicopter rotor blades lift efficiency
<administratively transferred to [Y02T 50/30](#) ADD>
- T Y02T 50/40
 - Weight reduction
- D Y02T 50/42
 - • Airframe
<administratively transferred to [Y02T 50/40](#) ADD>
- D Y02T 50/43
 - • • Composites
<administratively transferred to [Y02T 50/40](#) ADD>
- D Y02T 50/44
 - • • Design measures
<administratively transferred to [Y02T 50/40](#) ADD>
- D Y02T 50/46
 - • Interior
<administratively transferred to [Y02T 50/40](#) ADD>
- T Y02T 50/50
 - On board measures aiming to increase energy efficiency

- D Y02T 50/52
 - • concerning the electrical systems
 - <administratively transferred to [Y02T 50/50](#) ADD>
- D Y02T 50/53
 - • • Energy recovery, conversion or storage systems
 - <administratively transferred to [Y02T 50/50](#) ADD>
- D Y02T 50/54
 - • • All-electric or substantially electric architectures
 - <administratively transferred to [Y02T 50/50](#) ADD>
- D Y02T 50/55
 - • • Solar cells as on-board power source
 - <administratively transferred to [Y02T 50/50](#) ADD>
- D Y02T 50/56
 - • Thermal management, e.g. environmental control systems [ECS] or cooling
 - <administratively transferred to [Y02T 50/50](#) ADD>
- T Y02T 50/60
 - Efficient propulsion technologies, *e.g. for aircraft*
- D Y02T 50/62
 - • Electrical
 - <administratively transferred to [Y02T 50/60](#) ADD>
- D Y02T 50/64
 - • Hybrid
 - <administratively transferred to [Y02T 50/60](#) ADD>
- D Y02T 50/66
 - • Propellers
 - <administratively transferred to [Y02T 50/60](#) ADD>
- D Y02T 50/67
 - • Relevant aircraft propulsion technologies
 - <administratively transferred to [Y02T 50/60](#) ADD>
- D Y02T 50/671
 - • • Measures to reduce the propulsor weight
 - <administratively transferred to [Y02T 50/60](#) ADD>
- D Y02T 50/672
 - • • • using composites
 - <administratively transferred to [Y02T 50/60](#) ADD>
- D Y02T 50/673
 - • • Improving the blades aerodynamics
 - <administratively transferred to [Y02T 50/60](#) ADD>
- D Y02T 50/675
 - • • Enabling an increased combustion temperature by cooling
 - <administratively transferred to [Y02T 50/60](#) ADD>
- D Y02T 50/676
 - • • • Blades cooling
 - <administratively transferred to [Y02T 50/60](#) ADD>
- D Y02T 50/6765
 - • • Enabling an increased combustion temperature by thermal barrier coatings
 - <administratively transferred to [Y02T 50/60](#) ADD>
- D Y02T 50/677
 - • • Controlling the propulsor to control the emissions
 - <administratively transferred to [Y02T 50/60](#) ADD>
- M Y02T 50/678
 - • • *Aviation* using fuels of non-fossil origin
- T Y02T 50/80
 - Energy efficient operational measures, *e.g. ground operations or mission management*
- D Y02T 50/82
 - • Related to ground operations
 - <administratively transferred to [Y02T 50/80](#) ADD>
- D Y02T 50/823
 - • • Aircraft equipment, e.g. wheel embedded
 - <administratively transferred to [Y02T 50/80](#) ADD>
- D Y02T 50/826
 - • • Towing equipment
 - <administratively transferred to [Y02T 50/80](#) ADD>

- D Y02T 50/84
- • Related to management of trajectory and mission
<administratively transferred to [Y02T 50/80](#) ADD>
- T Y02T 70/00 Maritime or waterways transport**
- T Y02T 70/10
- Measures concerning design or construction of watercraft hulls
- D Y02T 70/12
- • Improving hydrodynamics of hull
<administratively transferred to [Y02T 70/10](#) ADD>
- D Y02T 70/121
- • • Reducing surface friction
<administratively transferred to [Y02T 70/10](#) ADD>
- D Y02T 70/122
- • • • Air lubrication, air cavity systems
<administratively transferred to [Y02T 70/10](#) ADD>
- D Y02T 70/123
- • • • Hull coatings, e.g. biomimicry
<administratively transferred to [Y02T 70/10](#) ADD>
- D Y02T 70/125
- • • Lower wave resistance
<administratively transferred to [Y02T 70/10](#) ADD>
- D Y02T 70/126
- • • • Bow shape
<administratively transferred to [Y02T 70/10](#) ADD>
- D Y02T 70/127
- • • improving wake pattern
<administratively transferred to [Y02T 70/10](#) ADD>
- D Y02T 70/128
- • • • reducing the interaction between hull and propeller
<administratively transferred to [Y02T 70/10](#) ADD>
- D Y02T 70/14
- • Construction of hull
<administratively transferred to [Y02T 70/10](#) ADD>
- D Y02T 70/143
- • • Materials, e.g. ultra-light steels, composites
<administratively transferred to [Y02T 70/10](#) ADD>
- D Y02T 70/146
- • • Energy efficient measures related to fabrication or assembly of hull
<administratively transferred to [Y02T 70/10](#) ADD>
- D Y02T 70/30
- Measures at the maintenance or repair stage specially aiming at green-house gasses emissions reduction
<administratively transferred to [Y02T 70/00](#) ADD>
- D Y02T 70/32
- • Surface or tank cleaning and treatment operations
<administratively transferred to [Y02T 70/00](#) ADD>
- D Y02T 70/34
- • Improved operation of fossil fuel transfer, e.g. ship-to-ship oil or gas transfer
<administratively transferred to [Y02T 70/00](#) ADD>
- D Y02T 70/36
- • Handling waste
<administratively transferred to [Y02T 70/00](#) ADD>
- T Y02T 70/50
- Measures to reduce greenhouse gas emissions related to the propulsion system
- D Y02T 70/52
- • Propulsion power plant
<administratively transferred to [Y02T 70/50](#) ADD>
- D Y02T 70/5209
- • • Relating to type of fuel
<administratively transferred to [Y02T 70/50](#) ADD>
- M Y02T 70/5218
- •  Less carbon-intensive fuels, e.g. natural gas, biofuels

- D Y02T 70/5227
 - • • Non-conventional fuels, e.g. nuclear
 - <administratively transferred to [Y02T 70/50](#) ADD>
- T Y02T 70/5236
 - • • Renewable or hybrid-electric solutions
- D Y02T 70/5245
 - • • using solar-generated electricity, e.g. photovoltaics
 - <administratively transferred to [Y02T 70/5236](#) ADD>
- D Y02T 70/5254
 - • • using wind motor to generate electricity
 - <administratively transferred to [Y02T 70/5236](#) ADD>
- D Y02T 70/5263
 - • • Other measures to increase efficiency of the power plant
 - <administratively transferred to [Y02T 70/50](#) ADD>
- D Y02T 70/5272
 - • • Engine monitoring and control
 - <administratively transferred to [Y02T 70/50](#) ADD>
- D Y02T 70/5281
 - • • Waste heat recovery
 - <administratively transferred to [Y02T 70/50](#) ADD>
- D Y02T 70/529
 - • • Reducing auxiliary power
 - <administratively transferred to [Y02T 70/50](#) ADD>
- D Y02T 70/54
 - • Propeller
 - <administratively transferred to [Y02T 70/50](#) ADD>
- D Y02T 70/542
 - • • Improved propeller design
 - <administratively transferred to [Y02T 70/50](#) ADD>
- D Y02T 70/545
 - • • Recovery of rotational energy
 - <administratively transferred to [Y02T 70/50](#) ADD>
- D Y02T 70/547
 - • • Wake equalizing arrangements
 - <administratively transferred to [Y02T 70/50](#) ADD>
- D Y02T 70/56
 - • Jets
 - <administratively transferred to [Y02T 70/50](#) ADD>
- D Y02T 70/58
 - • Propulsion by direct use of wind
 - <administratively transferred to [Y02T 70/5236](#) ADD>
- D Y02T 70/583
 - • • Energy efficient technologies involving sails
 - <administratively transferred to [Y02T 70/5236](#) ADD>
- D Y02T 70/586
 - • • Kites
 - <administratively transferred to [Y02T 70/5236](#) ADD>
- D Y02T 70/59
 - • Other propulsion concepts for reducing greenhouse gas emissions, e.g. wave-powered
 - <administratively transferred to [Y02T 70/5236](#) ADD>
- D Y02T 70/70
 - Technologies for a more efficient operation of the waterborne vessel not otherwise provided for
 - <administratively transferred to [Y02T 70/00](#) ADD>
- D Y02T 70/72
 - • Related to heating, ventilation, air conditioning, or refrigeration systems
 - <administratively transferred to [Y02T 70/00](#) ADD>
- D Y02T 70/74
 - • Integrating maritime voyage control
 - <administratively transferred to [Y02T 70/00](#) ADD>
- D Y02T 70/742
 - • • Speed reduction
 - <administratively transferred to [Y02T 70/00](#) ADD>

- D Y02T 70/745
 - . . . Weather-routing
 - <administratively transferred to [Y02T 70/00](#) ADD>
- D Y02T 70/747
 - . . . Course-optimization
 - <administratively transferred to [Y02T 70/00](#) ADD>
- D Y02T 70/80
 - . Measures concerning recycling, retrofitting or dismantling of waterborne vessels
 - <administratively transferred to [Y02T 70/00](#) ADD>
- D Y02T 70/90
 - . Port equipment or systems reducing GHG emissions
 - <administratively transferred to [Y02T 70/00](#) ADD>
- T Y02T 90/00**

Enabling technologies or technologies with a potential or indirect contribution to GHG emissions mitigation
- M Y02T 90/10
 - . Technologies ~~related to electric vehicle charging~~ *relating to charging of electric vehicles*
- T Y02T 90/12
 - . . Electric charging stations
- D Y02T 90/121
 - . . . by conductive energy transmission
 - <administratively transferred to [Y02T 90/12](#) ADD>
- D Y02T 90/122
 - . . . by inductive energy transmission
 - <administratively transferred to [Y02T 90/12](#) ADD>
- D Y02T 90/124
 - . . . by exchange of energy storage elements
 - <administratively transferred to [Y02T 90/12](#) ADD>
- D Y02T 90/125
 - . . . Alignment between the vehicle and the charging station
 - <administratively transferred to [Y02T 90/12](#) ADD>
- D Y02T 90/127
 - . . . Converters or inverters for charging
 - <administratively transferred to [Y02T 90/12](#) ADD>
- D Y02T 90/128
 - . . . Energy exchange control or determination
 - <administratively transferred to [Y02T 90/12](#) ADD>
- U Y02T 90/14
 - . Plug-in electric vehicles
- T Y02T 90/16
 - . Information or communication technologies improving the operation of electric vehicles
- D Y02T 90/161
 - . . . Navigation
 - <administratively transferred to [Y02T 90/16](#) ADD>
- D Y02T 90/162
 - Position-determination
 - <administratively transferred to [Y02T 90/16](#) ADD>
- D Y02T 90/163
 - . . . Information or communication technologies related to charging of electric vehicle
 - <administratively transferred to [Y02T 90/16](#) ADD>
- T Y02T 90/167
 - . . . Systems integrating technologies related to power network operation and communication or information technologies for supporting the interoperability of electric or hybrid vehicles, i.e. smartgrids as interface for battery charging of electric vehicles [EV] or hybrid vehicles [HEV] (~~power aggregation of EV or HEV Y02E 60/721~~)

NOTE
Documents tagged under [Y02T 90/167](#) are concurrently tagged also under [Y04S 30/10](#)
- D Y02T 90/168
 - Remote or cooperative charging operation
 - <administratively transferred to [Y02T 90/167](#) ADD>

- D Y02T 90/169
 - • • Aspects supporting the interoperability of electric or hybrid vehicles, e.g. recognition, authentication, identification or billing
 - <administratively transferred to [Y02T 90/167](#) ADD>
- D Y02T 90/30
 - Application of fuel cell technology to transportation
 - <administratively transferred to [Y02T 90/40](#) ADD>
- D Y02T 90/32
 - • Fuel cells specially adapted to transport applications, e.g. automobile, bus, ship
 - <administratively transferred to [Y02T 90/40](#) ADD>
- D Y02T 90/34
 - • Fuel cell powered electric vehicles [FCEV]
 - <administratively transferred to [Y02T 90/40](#) ADD>
- D Y02T 90/36
 - • Fuel cells as on-board power source in aeronautics
 - <administratively transferred to [Y02T 90/40](#) ADD>
- D Y02T 90/38
 - • Fuel cells as on-board power source in waterborne transportation
 - <administratively transferred to [Y02T 90/40](#) ADD>
- T Y02T 90/40
 - Application of hydrogen technology to transportation, *e.g. using fuel cells*
- D Y02T 90/42
 - • Hydrogen as fuel for road transportation
 - <administratively transferred to [Y02T 90/40](#) ADD>
- D Y02T 90/44
 - • Hydrogen as fuel in aeronautics
 - <administratively transferred to [Y02T 90/40](#) ADD>
- D Y02T 90/46
 - • Hydrogen as fuel in waterborne transportation
 - <administratively transferred to [Y02T 90/40](#) ADD>
- D Y02T 90/50
 - Computer aided design [CAD] for improving the mechanical performance in the sector of transportation, e.g. improvement of aerodynamics, noise or vibration reduction, tyre design
 - <administratively transferred to [Y02T 90/00](#) ADD>

Project: RP0678 (Y02W)

- M Y02W 10/00
 - Technologies for wastewater treatment (fuel from waste Y02E 50/30; methane from waste for energy generation Y02E 50/34)**
- T Y02W 10/10
 - Biological treatment of water, waste water, or sewage
- D Y02W 10/12
 - • Anaerobic processes with biogas recycling, capture or flaring
 - <administratively transferred to [Y02W 10/10](#) ADD>
- D Y02W 10/15
 - • Aerobic processes
 - <administratively transferred to [Y02W 10/10](#) ADD>
- D Y02W 10/18
 - • Constructed wetlands
 - <administratively transferred to [Y02W 10/10](#) ADD>
- T Y02W 10/20
 - Sludge processing
- D Y02W 10/23
 - • Anaerobic processes with biogas recycling, capture or flaring
 - <administratively transferred to [Y02W 10/20](#) ADD>
- D Y02W 10/27
 - • Aerobic processes
 - <administratively transferred to [Y02W 10/20](#) ADD>
- M Y02W 10/30
 - Wastewater or sewage treatment systems **with climate change mitigation effect characterised by the origin of the energy** *using renewable energies*
- U Y02W 10/33
 - • using wind energy
- U Y02W 10/37
 - • using solar energy

- T Y02W 10/40 · Valorisation of by-products of wastewater, sewage or sludge processing
- D Y02W 10/45 · · Obtention of bio-polymers
<administratively transferred to [Y02W 10/40](#) ADD>
- M Y02W 30/00 Technologies for solid waste management (heat utilisation in combustion or incineration of waste Y02E 20/12; fuel from waste Y02E 50/30; methane from waste for energy generation Y02E 50/34)**
- M Y02W 30/10 · ~~Related to waste~~ **Waste** collection, transportation, transfer or storage, e.g. segregated refuse collecting, electric or hybrid propulsion
- M Y02W 30/20 · ~~Related to waste~~ **Waste** processing or separation (~~separation techniques Y02W 30/522; separating plastic from other materials Y02W 30/622; removing refrigerant Y02W 30/825~~)
- T Y02W 30/30 · Landfill technologies aiming to mitigate methane emissions
- D Y02W 30/32 · · Sealing or covering
<administratively transferred to [Y02W 30/30](#) ADD>
- D Y02W 30/35 · · Landfill gas capture
<administratively transferred to [Y02W 30/30](#) ADD>
- D Y02W 30/38 · · Landfill gas flaring
<administratively transferred to [Y02W 30/30](#) ADD>
- T Y02W 30/40 · Bio-organic fraction processing; Production of fertilisers from the organic fraction of waste or refuse
- D Y02W 30/43 · · Aerobic fermentation, e.g. composting
<administratively transferred to [Y02W 30/40](#) ADD>
- D Y02W 30/47 · · Anaerobic fermentation, e.g. methanation combined with capture, recycling or flaring
<administratively transferred to [Y02W 30/40](#) ADD>
- T Y02W 30/50 · Reuse, recycling or recovery technologies
- T Y02W 30/52 · · ~~Dismantling or mechanical~~ **Mechanical** processing of waste for the recovery of materials ~~during separation, disassembly, pre-processing or upgrading, e.g. crushing, shredding, separation or disassembly~~
- D Y02W 30/521 · · · Crushing or shredding
<administratively transferred to [Y02W 30/52](#) ADD>
- D Y02W 30/522 · · · Separation techniques
<administratively transferred to [Y02W 30/52](#) ADD>
- D Y02W 30/523 · · · · Sieving or screening
<administratively transferred to [Y02W 30/52](#) ADD>
- D Y02W 30/524 · · · · based on density or gravimetry
<administratively transferred to [Y02W 30/52](#) ADD>
- D Y02W 30/525 · · · · using wind or air currents
<administratively transferred to [Y02W 30/52](#) ADD>
- D Y02W 30/526 · · · · Magnetic separation
<administratively transferred to [Y02W 30/52](#) ADD>
- D Y02W 30/527 · · · · Electrostatic separation
<administratively transferred to [Y02W 30/52](#) ADD>
- D Y02W 30/528 · · · · inducing eddy-currents
<administratively transferred to [Y02W 30/52](#) ADD>

- D Y02W 30/54 . . Metal-recycling
<administratively transferred to [Y02W 30/50](#) ADD>
- D Y02W 30/541 . . . Manufacture of articles from waste metal particles
<administratively transferred to [Y02W 30/50](#) ADD>
- D Y02W 30/542 . . . Recovery or treatment of by-products during pig-iron manufacturing (use of waste of metallurgical processes as filler for mortars or concrete Y02W 30/94)
<administratively transferred to [Y02W 30/50](#) ADD>
- D Y02W 30/543 Treatment of liquid slag
<administratively transferred to [Y02W 30/50](#) ADD>
- M Y02W 30/56 . . **Disassembly of vehicles for recovery of salvageable parts of vehicles**
- U Y02W 30/58 . . Construction or demolition [C&D] waste
- T Y02W 30/60 . . Glass recycling
- D Y02W 30/61 . . . Glass containers reutilization
<administratively transferred to [Y02W 30/60](#) ADD>
- T Y02W 30/62 . . Plastics recycling; **Rubber recycling**
- D Y02W 30/622 . . . Separating plastics from other materials
<administratively transferred to [Y02W 30/62](#) ADD>
- D Y02W 30/625 . . . Disintegrating plastics
<administratively transferred to [Y02W 30/62](#) ADD>
- D Y02W 30/628 . . . Plastic containers reutilization
<administratively transferred to [Y02W 30/62](#) ADD>
- T Y02W 30/64 . . Paper recycling
- D Y02W 30/642 . . . Dry methods for dividing waste paper into small particles
<administratively transferred to [Y02W 30/64](#) ADD>
- D Y02W 30/644 by-cutting actions
<administratively transferred to [Y02W 30/64](#) ADD>
- D Y02W 30/646 . . . Wet methods for dividing waste paper into small particles
<administratively transferred to [Y02W 30/64](#) ADD>
- D Y02W 30/648 . . . Recovery of cellulose by working-up waste paper
<administratively transferred to [Y02W 30/64](#) ADD>
- T Y02W 30/66 . . Disintegrating fibre-containing textile articles to obtain fibres for re-use
- D Y02W 30/663 . . . Opening, unravelling or teasing ropes or like fibrous strands to obtain fibres for re-use
<administratively transferred to [Y02W 30/66](#) ADD>
- D Y02W 30/667 . . . Opening rags to obtain fibres for re-use
<administratively transferred to [Y02W 30/66](#) ADD>
- D Y02W 30/68 . . Rubber waste recycling
<administratively transferred to [Y02W 30/62](#) ADD>
- D Y02W 30/683 . . . Utilisation of recycled rubber in footwear
<administratively transferred to [Y02W 30/62](#) ADD>
- D Y02W 30/687 . . . Utilisation of recycled tires for hydraulic engineering
<administratively transferred to [Y02W 30/62](#) ADD>

- D Y02W 30/70
- • Recovery of polymers other than plastics or rubbers
<administratively transferred to [Y02W 30/62](#) ADD>
- D Y02W 30/701
- • • without chemical reactions
<administratively transferred to [Y02W 30/62](#) ADD>
- D Y02W 30/702
- • • by chemically breaking down the molecular chains of polymers or breaking of crosslinks, e.g. devulcanisation
<administratively transferred to [Y02W 30/62](#) ADD>
- D Y02W 30/703
- • • • by dry-heat treatment only
<administratively transferred to [Y02W 30/62](#) ADD>
- D Y02W 30/704
- • • • by treatment with steam or water
<administratively transferred to [Y02W 30/62](#) ADD>
- D Y02W 30/705
- • • • by treatment with inorganic material
<administratively transferred to [Y02W 30/62](#) ADD>
- D Y02W 30/706
- • • • by treatment with organic material
<administratively transferred to [Y02W 30/62](#) ADD>
- D Y02W 30/72
- • Recovery of luminescent materials
<administratively transferred to [Y02W 30/50](#) ADD>
- U Y02W 30/74
- • Recovery of fats, fatty oils, fatty acids or other fatty substances, e.g. lanolin or waxes
- D Y02W 30/76
- • Recovery of tanning agents from leather
<administratively transferred to [Y02W 30/50](#) ADD>
- M Y02W 30/78
- • Recycling of wood or furniture waste (~~production of fertilisers from the organic fraction of waste or refuse Y02W 30/40~~)
- T Y02W 30/80
- • Packaging reuse or recycling, *e.g. of multilayer packaging* (bio-packaging [Y02W 90/10](#))
- D Y02W 30/801
- • • Technologies specific to multilayer packaging
<administratively transferred to [Y02W 30/80](#) ADD>
- D Y02W 30/802
- • • Packaging eco-design or eco-conception
<administratively transferred to [Y02W 30/80](#) ADD>
- D Y02W 30/803
- • • • Packaging containers made of recycled materials
<administratively transferred to [Y02W 30/80](#) ADD>
- D Y02W 30/804
- • • • • the recycled material being paper
<administratively transferred to [Y02W 30/80](#) ADD>
- D Y02W 30/805
- • • • Packaging containers especially suited for or with means facilitating recycling
<administratively transferred to [Y02W 30/80](#) ADD>
- D Y02W 30/806
- • • • • Packaging containers consisting of two or more parts made of the same material
<administratively transferred to [Y02W 30/80](#) ADD>
- D Y02W 30/807
- • • • Packaging containers especially suited for or with means facilitating reusability
<administratively transferred to [Y02W 30/80](#) ADD>
- T Y02W 30/82
- • Recycling of waste of electrical or electronic equipment [WEEE]

- D Y02W 30/821 . . . Recovery of metals from electric or electronic cables or wires scrap (metal recycling Y02W 30/54)
<administratively transferred to [Y02W 30/82](#) ADD>
- D Y02W 30/822 . . . Recovery of materials from electronic scrap, e.g. printed circuit board scrap
<administratively transferred to [Y02W 30/82](#) ADD>
- D Y02W 30/823 . . . Technologies specific to particular WEEE categories
<administratively transferred to [Y02W 30/82](#) ADD>
- D Y02W 30/824 . . . Refrigerators
<administratively transferred to [Y02W 30/82](#) ADD>
- D Y02W 30/825 . . . Removing refrigerant
<administratively transferred to [Y02W 30/82](#) ADD>
- D Y02W 30/826 . . . Information technology [IT] or telecommunication equipment
<administratively transferred to [Y02W 30/82](#) ADD>
- D Y02W 30/827 . . . Consumers equipment or photovoltaic panels
<administratively transferred to [Y02W 30/82](#) ADD>
- D Y02W 30/828 . . . Lighting equipment or discharge tubes
<administratively transferred to [Y02W 30/82](#) ADD>
- D Y02W 30/829 . . . Lighting devices made of waste or recyclable material
<administratively transferred to [Y02W 30/82](#) ADD>
- T Y02W 30/84 . . Recycling of batteries *or fuel cells*
- D Y02W 30/86 . . Recycling of fuel cells
<administratively transferred to [Y02W 30/84](#) ADD>
- D Y02W 30/88 . . Nuclear fuel reprocessing
<administratively transferred to [Y02W 30/50](#) ADD>
- D Y02W 30/881 . . Apparatus or processes for dismantling nuclear fuel, e.g. before reprocessing
<administratively transferred to [Y02W 30/50](#) ADD>
- D Y02W 30/882 . . Reprocessing of irradiated solid fuel
<administratively transferred to [Y02W 30/50](#) ADD>
- D Y02W 30/883 . . . Aqueous processes, e.g. based on organic extraction means or regeneration thereof
<administratively transferred to [Y02W 30/50](#) ADD>
- D Y02W 30/884 . . . Non-aqueous processes
<administratively transferred to [Y02W 30/50](#) ADD>
- D Y02W 30/90 . . Reuse, recycling or recovery technologies cross-cutting to different types of waste
<administratively transferred to [Y02W 30/50](#) ADD>
- T Y02W 30/91 . . Use of waste materials as fillers for mortars or concrete
- D Y02W 30/92 . . . Combustion residues, e.g. purification products of smoke, fumes or exhaust gases
<administratively transferred to [Y02W 30/91](#) ADD>
- D Y02W 30/93 . . . from quarries, mining or the like
<administratively transferred to [Y02W 30/91](#) ADD>

- D Y02W 30/94 from metallurgical processes
<administratively transferred to [Y02W 30/91](#) ADD>
- D Y02W 30/95 from building or ceramic industry
<administratively transferred to [Y02W 30/91](#) ADD>
- D Y02W 30/96 organic, e.g. rubber, polystyrene
<administratively transferred to [Y02W 30/91](#) ADD>
- D Y02W 30/97 Vegetable refuse, e.g. rice husks, maize-ear refuse; cellulosic materials, e.g. paper
<administratively transferred to [Y02W 30/91](#) ADD>
- T Y02W 90/00 Enabling technologies or technologies with a potential or indirect contribution to greenhouse gas [GHG] emissions mitigation**
- T Y02W 90/10 . Bio-packaging, e.g. *packing containers made from renewable resources or bio-plastics*
- D Y02W 90/11 . . Packing containers made from renewable resources
<administratively transferred to [Y02W 90/10](#) ADD>
- D Y02W 90/12 . . . Packing containers made of bio-plastics
<administratively transferred to [Y02W 90/10](#) ADD>
- D Y02W 90/13 . . Biodegradable packaging containers
<administratively transferred to [Y02W 90/10](#) ADD>
- D Y02W 90/14 . . . Compostable packaging containers
<administratively transferred to [Y02W 90/10](#) ADD>
- D Y02W 90/20 . Computer systems or methods specially adapted for waste reduction or recycling of materials or goods
<administratively transferred to [Y02W 90/00](#) ADD>

Project: RP0678 (Y04S)

- T Y04S 10/00 Systems supporting electrical power generation, transmission or distribution**
- D Y04S 10/10 . Systems characterised by the monitored, controlled or operated power network elements or equipment
<administratively transferred to [Y04S 10/00](#) ADD>
- M Y04S 10/12 . ~~the elements or equipment being or involving energy generation units, including distributed~~ *Monitoring or controlling equipment for energy generation units, e.g. distributed energy* generation [DER] or load-side generation
- M Y04S 10/123 . . ~~the energy generation units being or involving renewable energy sources~~
- M Y04S 10/126 . . ~~the energy generation units being or involving electric vehicles [EV] or hybrid vehicles [HEV], i.e. power aggregation of EV or HEV, vehicle to grid arrangements [V2G]-(remote or cooperative charging Y04S 30/12; details associated with the interoperability in the section of transportation, e.g. vehicle recognition, authentication, identification or billing Y04S 30/14)~~
- M Y04S 10/14 . ~~the elements or equipments being or involving energy~~ *Energy* storage units (for systems comprising uninterruptible power supplies or standby generators Y04S 20/12)
- M Y04S 10/16 . ~~the elements or equipments being or involving electric~~ *Electric* power substations
- M Y04S 10/18 . ~~the elements or equipments being or involving~~ *using* switches, relays or circuit breakers, e.g. intelligent electronic devices [IED]

- M Y04S 10/20
- ~~the elements or equipments being or involving~~ *using* protection elements, arrangements or systems
- M Y04S 10/22
- ~~the element or elements being flexible~~ *Flexible* AC transmission systems [FACTS] or power factor or reactive power compensating or correcting units
- D Y04S 10/24
- ~~the elements or equipments being or involving~~ voltage regulating units
<administratively transferred to [Y04S 10/00](#) ADD>
- D Y04S 10/26
- ~~the elements or equipments being or involving~~ measuring units
<administratively transferred to [Y04S 10/00](#) ADD>
- D Y04S 10/265
- ~~the measuring units being or involving~~ phasor measuring units [PMU]
<administratively transferred to [Y04S 10/00](#) ADD>
- M Y04S 10/30
- ~~Systems characterised by state~~ *State* monitoring, e.g. fault, temperature monitoring, insulator monitoring, corona discharge
- M Y04S 10/40
- ~~Systems characterised by the display~~ *Display* of information, e.g. of data or controls
- T Y04S 10/50
- Systems or methods supporting the power network operation or management, involving a certain degree of interaction with the load-side end user applications
- T Y04S 10/52
- ~~Outage or fault management,~~ *e.g. fault detection or location*
- D Y04S 10/522
- ~~Fault detection or location~~
<administratively transferred to [Y04S 10/52](#) ADD>
- D Y04S 10/525
- ~~Power restoration~~
<administratively transferred to [Y04S 10/52](#) ADD>
- D Y04S 10/527
- ~~Power quality monitoring~~
<administratively transferred to [Y04S 10/52](#) ADD>
- D Y04S 10/54
- ~~Management of operational aspects~~
<administratively transferred to [Y04S 10/50](#) ADD>
- D Y04S 10/542
- ~~Planning, load or production forecast~~
<administratively transferred to [Y04S 10/50](#) ADD>
- D Y04S 10/545
- ~~Computing methods or systems for efficient or low carbon management or operation of electric power systems~~
<administratively transferred to [Y04S 10/50](#) ADD>
- D Y04S 10/547
- ~~Maintenance, construction or extension~~
<administratively transferred to [Y04S 10/50](#) ADD>
- D Y04S 10/56
- ~~Supply chain or logistics, e.g. warehousing, distribution, inventory, stock management, order filling, procurement or balancing against orders~~
<administratively transferred to [Y04S 10/50](#) ADD>
- D Y04S 10/58
- ~~Financial or economic aspects related to the network operation~~
<administratively transferred to [Y04S 10/50](#) ADD>
- D Y04S 10/60
- ~~Reporting; Information providing; Statistics or analysis~~
<administratively transferred to [Y04S 10/50](#) ADD>
- T Y04S 20/00
- ~~Systems supporting the management~~ *Management* or operation of end-user stationary applications, including also *or* the last stages of power distribution and the control, monitoring or operating management systems at local level (the energy generation units being or involving electricity based vehicles Y04S 10/126; remote or cooperative charging of electric or hybrid vehicles Y04S 30/12); *Controlling, monitoring or operating thereof***

- D Y04S 20/10
- System characterised by the monitored, controlled or operated end-user elements or equipments
- <administratively transferred to [Y04S 20/00](#) ADD>
- M Y04S 20/12
- ~~the elements or equipments being or involving energy~~ **Energy** storage units, uninterruptible power supply [UPS] systems or standby or emergency generators **involved, e.g.** in the last power distribution stages
- M Y04S 20/14
- ~~The elements or equipments being or involving protection elements~~ **Protecting elements**, switches, relays or circuit breakers
- D Y04S 20/16
- • The elements or equipments being or involving power plugs, sockets, adapters or power strips
- <administratively transferred to [Y04S 20/00](#) ADD>
- D Y04S 20/18
- • The element or elements being a direct current power network, grid or distribution line
- <administratively transferred to [Y04S 20/00](#) ADD>
- T Y04S 20/20
- End-user application control systems
- D Y04S 20/22
- • characterised by the aim of the control
- <administratively transferred to [Y04S 20/20](#) ADD>
- M Y04S 20/221
- • ~~General power management systems~~
- T Y04S 20/222
- • ~~Demand response systems, e.g. load shedding, peak shaving~~
- D Y04S 20/224
- • • Curtailment; Interruptions; Retail price-responsive demand
- <administratively transferred to [Y04S 20/222](#) ADD>
- D Y04S 20/225
- • • The system entering an energy saving mode, i.e. sleep, low-power or standby modes
- <administratively transferred to [Y04S 20/20](#) ADD>
- D Y04S 20/227
- • • Domotics or building automation systems
- <administratively transferred to [Y04S 20/20](#) ADD>
- D Y04S 20/228
- • • Characterised by involving a home automation communication network
- <administratively transferred to [Y04S 20/20](#) ADD>
- D Y04S 20/24
- • characterised by the end-user application
- <administratively transferred to [Y04S 20/20](#) ADD>
- M Y04S 20/242
- • ~~the end-user application being or involving home~~ **Home** appliances
- M Y04S 20/244
- • • ~~the home appliances being or involving heating ventilating and air conditioning [HVAC] units~~
- M Y04S 20/246
- • • ~~the system involving the remote operation of lamps or lighting equipment~~
- M Y04S 20/248
- • ~~the end-user application involving~~ UPS systems or standby or emergency generators
- T Y04S 20/30
- Smart metering, **e.g. specially adapted for remote reading**
- D Y04S 20/32
- • Systems characterised by remote reading
- <administratively transferred to [Y04S 20/30](#) ADD>
- D Y04S 20/322
- • • from a fixed location
- <administratively transferred to [Y04S 20/30](#) ADD>
- D Y04S 20/325
- • • from a mobile location
- <administratively transferred to [Y04S 20/30](#) ADD>
- D Y04S 20/327
- • • The remote reading system including mechanisms for turning on/off the supply
- <administratively transferred to [Y04S 20/30](#) ADD>

- D Y04S 20/34
- ~~Systems which determine the environmental impact of user behavior~~
<administratively transferred to [Y04S 20/30](#) ADD>
- D Y04S 20/36
- ~~Methods or devices for detecting or reporting abnormalities, e.g. faults, outages, leaks~~
<administratively transferred to [Y04S 20/30](#) ADD>
- D Y04S 20/38
- ~~Identification of individual loads by analysing current or voltage waveforms~~
<administratively transferred to [Y04S 20/30](#) ADD>
- D Y04S 20/40
- ~~Displaying of usage with respect to time, e.g. monitoring evolution of usage, relating usage and weather conditions~~
<administratively transferred to [Y04S 20/30](#) ADD>
- D Y04S 20/42
- ~~Utility meters which are networked together, e.g. within a single building~~
<administratively transferred to [Y04S 20/30](#) ADD>
- D Y04S 20/44
- ~~Displaying utility price or cost~~
<administratively transferred to [Y04S 20/30](#) ADD>
- D Y04S 20/46
- ~~Remote display of meters readings~~
<administratively transferred to [Y04S 20/30](#) ADD>
- D Y04S 20/48
- ~~Methods for determining the topology of meters in a network~~
<administratively transferred to [Y04S 20/30](#) ADD>
- D Y04S 20/50
- ~~Retrofitting of installed meters~~
<administratively transferred to [Y04S 20/30](#) ADD>
- D Y04S 20/52
- ~~Systems oriented to metering of generated energy or power~~
<administratively transferred to [Y04S 20/30](#) ADD>
- D Y04S 20/525
- ~~Monitoring the performance of renewable electricity generating systems, i.e. of solar panels~~
<administratively transferred to [Y04S 20/30](#) ADD>
- U Y04S 30/00** **Systems supporting specific end-user applications in the sector of transportation**
- U Y04S 30/10
- Systems supporting the interoperability of electric or hybrid vehicles
- U Y04S 30/12
- ~~Remote or cooperative charging~~
- U Y04S 30/14
- ~~Details associated with the interoperability, e.g. vehicle recognition, authentication, identification or billing~~
- T Y04S 40/00** **Systems for electrical power generation, transmission, distribution or end-user application management characterised by the use of communication or information technologies, or communication or information technology specific aspects supporting them**
- D Y04S 40/10
- ~~characterised by communication technology~~
<administratively transferred to [Y04S 40/00](#) ADD>
- M Y04S 40/12
- ~~characterised by data transport means between the monitoring, controlling or managing units and monitored, controlled or operated electrical equipment~~
- T Y04S 40/121
- ~~Using **using** the power network as support for the transmission~~
- D Y04S 40/122
- ~~Using pulsed signals~~
<administratively transferred to [Y04S 40/121](#) ADD>
- D Y04S 40/123
- ~~Using modification of a parameter of the network power signal~~
<administratively transferred to [Y04S 40/121](#) ADD>
- T Y04S 40/124
- ~~using wired telecommunication networks or data transmission busses~~

- D Y04S 40/125
- • • Using phone lines
 - <administratively transferred to [Y04S 40/124](#) ADD>
- T Y04S 40/126
- • • Using *using* wireless data transmission
- D Y04S 40/127
- • • • by means of mobile telephony
 - <administratively transferred to [Y04S 40/126](#) ADD>
- M Y04S 40/128
- • • involving the use of Internet protocol
- D Y04S 40/14
- • Communication technology specific aspects
 - <administratively transferred to [Y04S 40/00](#) ADD>
- D Y04S 40/143
- • • using dedicated transmission supports
 - <administratively transferred to [Y04S 40/00](#) ADD>
- D Y04S 40/146
- • • using power networks as support for transmission
 - <administratively transferred to [Y04S 40/121](#) ADD>
- D Y04S 40/16
- • Details of management of the overlaying communication network between the monitoring, controlling or managing units and monitored, controlled or operated electrical equipment
 - <administratively transferred to [Y04S 40/00](#) ADD>
- D Y04S 40/162
- • • related to configuration or provisioning
 - <administratively transferred to [Y04S 40/00](#) ADD>
- D Y04S 40/164
- • • related to network topology
 - <administratively transferred to [Y04S 40/00](#) ADD>
- D Y04S 40/166
- • • related to fault management
 - <administratively transferred to [Y04S 40/00](#) ADD>
- D Y04S 40/168
- • • for performance monitoring
 - <administratively transferred to [Y04S 40/00](#) ADD>
- M Y04S 40/18
- • Network protocols supporting networked applications, e.g. including control of end-device applications over a network
- T Y04S 40/20
- Information technology specific aspects, *e.g. CAD, simulation, modelling, system security*
- D Y04S 40/22
- • Computer aided design [CAD]; Simulation; Modelling
 - <administratively transferred to [Y04S 40/20](#) ADD>
- D Y04S 40/24
- • Arrangements for network security or for protecting computers or computer systems against unauthorised activity, e.g. cyber security
 - <administratively transferred to [Y04S 40/20](#) ADD>
- U Y04S 50/00**
- Market activities related to the operation of systems integrating technologies related to power network operation or related to communication or information technologies**
- U Y04S 50/10
- Energy trading, including energy flowing from end-user application to grid
- U Y04S 50/12
- Billing, invoicing, buying or selling transactions or other related activities, e.g. cost or usage evaluation
- U Y04S 50/14
- Marketing, i.e. market research and analysis, surveying, promotions, advertising, buyer profiling, customer management or rewards
- U Y04S 50/16
- Energy services, e.g. dispersed generation or demand or load or energy savings aggregation

Project: RP0423 (Y10T)

D	Y10T 307/00 - Y10T 307/00	<u>Former US Class 307 series</u>
D	Y10T 307/00	Electrical transmission or interconnection systems
D	Y10T 307/25	· Plural load circuit systems
D	Y10T 307/258	· · Common conductor or return type
D	Y10T 307/266	· · · Polyphase
D	Y10T 307/273	· · · · Phase balancing
D	Y10T 307/281	· · · Voltage divider type
D	Y10T 307/289	· · · Plural output generators
D	Y10T 307/297	· · Transformer connections
D	Y10T 307/305	· · Plural sources of supply
D	Y10T 307/313	· · · Interconnected for energy transfer
D	Y10T 307/32	· · · · With control of magnitude of energy transfer
D	Y10T 307/328	· · · · Diverse sources
D	Y10T 307/336	· · · · · AC and DC
D	Y10T 307/344	· · · Substitute or alternate source
D	Y10T 307/352	· · · With control of magnitude of current or power
D	Y10T 307/359	· · · Diverse sources
D	Y10T 307/367	· · · · AC and DC
D	Y10T 307/375	· · · · Different frequencies
D	Y10T 307/383	· · · · Different voltages
D	Y10T 307/391	· · · Selectively connected loads and/or sources
D	Y10T 307/398	· · Anticoupling of load circuits through same source
D	Y10T 307/406	· · Control of current or power
D	Y10T 307/414	· · · Load current proportioning or dividing
D	Y10T 307/422	· · · Constant magnitude control
D	Y10T 307/43	· · · · By control of one or more load circuits
D	Y10T 307/438	· · · Limit control
D	Y10T 307/445	· · Serially connected load circuits
D	Y10T 307/453	· · · Selective series-parallel connections
D	Y10T 307/461	· · Selectively connected or controlled load circuits
D	Y10T 307/469	· · · Condition responsive
D	Y10T 307/477	· · · Code-controlled
D	Y10T 307/484	· · · Sequential or alternating
D	Y10T 307/492	· · Circuit arrangements or layouts
D	Y10T 307/50	· Plural supply circuits or sources
D	Y10T 307/505	· · One source floats across or compensates for other source
D	Y10T 307/511	· · · With intervening converter
D	Y10T 307/516	· · · · Storage battery or accumulator-type source
D	Y10T 307/522	· · · · Dynamoelectric-type source
D	Y10T 307/527	· · · · Storage battery or accumulator-type source
D	Y10T 307/533	· · · · With series-connected auxiliary source
D	Y10T 307/538	· · · · Tap-changing or variable number of cells

- D Y10T 307/544 . . Circulating or inter-current control or prevention
- D Y10T 307/549 . . Load current control
- D Y10T 307/555 . . . Load current division
- D Y10T 307/56 Serially connected sources
- D Y10T 307/565 Fixed or predetermined ratio
- D Y10T 307/571 Diverse or unlike type sources
- D Y10T 307/576 Plural generators
- D Y10T 307/582 Plural converters
- D Y10T 307/587 Peak or excess load
- D Y10T 307/593 . . . Constant load or current
- D Y10T 307/598 Serially connected sources
- D Y10T 307/604 . . . Load limiting
- D Y10T 307/609 . . . Serially connected sources
- D Y10T 307/615 . . Substitute or emergency source
- D Y10T 307/62 . . . Plural substitute sources
- D Y10T 307/625 . . . Storage battery or accumulator
- D Y10T 307/631 With intervening dynamoelectric machine
- D Y10T 307/636 . . . Dynamoelectric
- D Y10T 307/642 . . Sources distributed along load circuit
- D Y10T 307/647 . . Load transfer without paralleling sources
- D Y10T 307/653 . . Series-parallel connection of sources
- D Y10T 307/658 . . Diverse or unlike electrical characteristics
- D Y10T 307/664 . . . Differing frequencies
- D Y10T 307/669 . . . Differing capacities
- D Y10T 307/675 . . . Differing voltages
- D Y10T 307/68 Generator sources
- D Y10T 307/685 . . Series-connected sources
- D Y10T 307/691 . . . Generator sources
- D Y10T 307/696 . . Selective or optional sources
- D Y10T 307/702 . . . Predetermined sequence
- D Y10T 307/707 . . Plural converters
- D Y10T 307/713 . . Plural transformers
- D Y10T 307/718 . . Plural generators
- D Y10T 307/724 . . Connecting or disconnecting
- D Y10T 307/729 . . . Condition responsive
- D Y10T 307/735 Attainment of voltage, frequency or phase relationship
- D Y10T 307/74 . . Switching systems
- D Y10T 307/747 . . Plural switches
- D Y10T 307/753 . . . Lazy-man switch type
- D Y10T 307/76 . . . Selectively actuated
- D Y10T 307/766 . . Condition responsive
- D Y10T 307/773 . . . Light, heat, vibratory or radiant energy
- D Y10T 307/779 . . . Fluid pressure, density, level, velocity or humidity
- D Y10T 307/786 . . . Mechanical force

- D Y10T 307/793 Speed, centrifugal or kinetic force
- D Y10T 307/799 Inertia or acceleration
- D Y10T 307/806 Direction of rotation
- D Y10T 307/812 Differential speed between two bodies
- D Y10T 307/819 Torque
- D Y10T 307/826 Electrical
- D Y10T 307/832 Power or energy
- D Y10T 307/839 Polarity, phase sequence or reverse flow
- D Y10T 307/845 AC or DC discriminating
- D Y10T 307/852 Frequency
- D Y10T 307/858 Voltage
- D Y10T 307/865 Current
- D Y10T 307/872 Repetitive make and break
- D Y10T 307/878 Electronically controlled relay
- D Y10T 307/885 Responsive to physical condition
- D Y10T 307/891 Thermal relay
- D Y10T 307/898 Vibrating relay
- D Y10T 307/904 Miscellaneous
- D Y10T 307/911 With operation facilitating feature
- D Y10T 307/918 Preliminary reduction in current or voltage of system
- D Y10T 307/924 Switch contact conditioning
- D Y10T 307/931 Polarity reversing
- D Y10T 307/937 Switch actuation
- D Y10T 307/944 Power circuit controlled
- D Y10T 307/951 With time delay or retardation means
- D Y10T 307/957 Electrically initiated
- D Y10T 307/964 Series connected switches
- D Y10T 307/97 With locking, holding or braking means
- D Y10T 307/977 Electrical actuator
- D Y10T 307/983 Fluid pressure actuator

Project: RP0322 (Y10T)

- U Y10T 428/00 Stock material or miscellaneous articles**
- D Y10T 428/10 Liquid crystal optical display having layer of specified composition
<administratively transferred to [C09K 2323/00](#) ADD>
- D Y10T 428/1005 Alignment layer of specified composition
<administratively transferred to [C09K 2323/02](#) ADD>
- D Y10T 428/1009 Alignment layer is inorganic
<administratively transferred to [C09K 2323/021](#) ADD>
- D Y10T 428/1014 Silicon compound [i.e., organosilicon]
<administratively transferred to [C09K 2323/023](#) ADD>
- D Y10T 428/1018 Polyamide
<administratively transferred to [C09K 2323/025](#) ADD>

- D Y10T 428/1023 . . . Polyimide
<administratively transferred to [C09K 2323/027](#) ADD>
- D Y10T 428/1027 . . . Polyimidfluoride
<administratively transferred to [C09K 2323/0271](#) ADD>
- D Y10T 428/1032 . . . Polyimidmetalo
<administratively transferred to [C09K 2323/0273](#) ADD>
- D Y10T 428/1036 . . with viewing layer of specified composition
<administratively transferred to [C09K 2323/03](#) ADD>
- D Y10T 428/1041 . . . Polarizer or dye containing viewing layer
<administratively transferred to [C09K 2323/031](#) ADD>
- D Y10T 428/1045 . . . Silicon compound [e.g., glass, organosilicon, etc.]
<administratively transferred to [C09K 2323/033](#) ADD>
- D Y10T 428/105 . . . Ester [e.g., polycarbonate, polyacrylate, etc.]
<administratively transferred to [C09K 2323/035](#) ADD>
- D Y10T 428/1055 . . with charge transferring layer of specified composition
<administratively transferred to [C09K 2323/04](#) ADD>
- D Y10T 428/1059 . . with bonding or intermediate layer of specified composition [e.g., sealant, space, etc.]
<administratively transferred to [C09K 2323/05](#) ADD>
- D Y10T 428/1064 . . . Inorganic layer
<administratively transferred to [C09K 2323/051](#) ADD>
- D Y10T 428/1068 . . . Silicon compound [i.e., organosilicon]
<administratively transferred to [C09K 2323/053](#) ADD>
- D Y10T 428/1073 . . . Epoxy
<administratively transferred to [C09K 2323/055](#) ADD>
- D Y10T 428/1077 . . . Ester
<administratively transferred to [C09K 2323/057](#) ADD>
- D Y10T 428/1082 . . . Unsaturated aliphatic polymer [e.g., vinyl, etc.]
<administratively transferred to [C09K 2323/059](#) ADD>
- D Y10T 428/1086 . . with substrate layer of specified composition
<administratively transferred to [C09K 2323/06](#) ADD>
- D Y10T 428/1091 . . . Releasable substrate layer to expose adhesive
<administratively transferred to [G02F 2202/28](#) ADD>
- D Y10T 428/1095 . . . Inorganic substrate layer [e.g., ceramic, metallic, glass, etc.]
<administratively transferred to [C09K 2323/061](#) ADD>