

# CPC COOPERATIVE PATENT CLASSIFICATION

## B PERFORMING OPERATIONS; TRANSPORTING

(NOTES omitted)

### TRANSPORTING

## B63 SHIPS OR OTHER WATERBORNE VESSELS; RELATED EQUIPMENT

### B63H MARINE PROPULSION OR STEERING ({arrangement of propulsion or steering means on amphibious vehicles [B60F 3/0007](#); } propulsion of air-cushion vehicles [B60V 1/14](#); peculiar to submarines, other than nuclear propulsion, [B63G](#); peculiar to torpedoes [F42B 19/00](#))

#### NOTE

In this subclass, the indexing codes [B63B 2201/00](#) - [B63B 2241/00](#) are to be used for relevant technical information concerning particular or unusual use, materials, design, methods or means

#### 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.

<b>1/00</b>	<b>Propulsive elements directly acting on water (jet propulsion <a href="#">B63H 11/00</a>; attachment of propellers on shafts <a href="#">B63H 23/34</a>)</b>	<b>1/18</b>	. . . . with means for diminishing cavitation, e.g. supercavitation
<b>2001/005</b>	. {using Magnus effect}	<b>2001/185</b>	. . . . {Surfacing propellers, i.e. propellers specially adapted for operation at the water surface, with blades incompletely submerged, or piercing the water surface from above in the course of each revolution}
<b>1/02</b>	. of rotary type (endless-track type <a href="#">B63H 1/34</a> )	<b>1/20</b>	. . . . Hubs; Blade connections
<b>1/04</b>	. . with rotation axis substantially at right angles to propulsive direction	<b>1/22</b>	. . . . the blades being foldable
<b>2001/045</b>	. . . {with partially immersed nutating or undulated disks, e.g. wobble plates}	<b>1/24</b>	. . . . automatically foldable or unfoldable
<b>1/06</b>	. . . with adjustable vanes or blades	<b>1/26</b>	. . . . Blades
<b>1/08</b>	. . . . with cyclic adjustment	<b>1/265</b>	. . . . {each blade being constituted by a surface enclosing an empty space, e.g. forming a closed loop}
<b>1/10</b>	. . . . of Voith Schneider type, i.e. with blades extending axially from a disc-shaped rotary body	<b>1/28</b>	. . . . Other means for improving propeller efficiency (water-guiding elements formed by shape of hull <a href="#">B63H 5/00</a> )
<b>2001/105</b>	. . . . {with non-mechanical control of individual blades, e.g. electric or hydraulic control}	<b>2001/283</b>	. . . . {Propeller hub caps with fins having a pitch different from pitch of propeller blades, or a helix hand opposed to the propellers' helix hand}
<b>1/12</b>	. . with rotation axis substantially in propulsive direction	<b>2001/286</b>	. . . . {Injection of gas into fluid flow to propellers, or around propeller blades}
<b>2001/122</b>	. . . {Single or multiple threaded helicoidal screws, or the like, comprising foils extending over a substantial angle; Archimedean screws}	<b>1/30</b>	. of non-rotary type
<b>2001/125</b>	. . . . {with helicoidal foils projecting from outside surfaces of floating rotatable bodies, e.g. rotatable, cylindrical bodies}	<b>1/32</b>	. . Flaps, pistons, or the like, reciprocating in propulsive direction
<b>2001/127</b>	. . . . {with helicoidal foils projecting from inside surfaces of rotating shrouds; Archimedean screws}	<b>1/34</b>	. . of endless-track type
<b>1/14</b>	. . . Propellers (pitch changing <a href="#">B63H 3/00</a> )	<b>2001/342</b>	. . . {with tracks substantially parallel to propulsive direction}
<b>2001/145</b>	. . . . {comprising blades of two or more different types, e.g. different lengths}	<b>2001/344</b>	. . . . {having paddles mounted in fixed relation to tracks, or to track members}
<b>1/15</b>	. . . . having vibration damping means (anti-vibration mounting of propulsion plant <a href="#">B63H 21/30</a> ; means for damping vibration in general <a href="#">F16F</a> )	<b>2001/346</b>	. . . . {having paddles movably mounted on the track or on track members, e.g. articulated, or with means for cyclically controlling the paddles' angular position or orientation}
<b>1/16</b>	. . . . having a shrouding ring attached to blades	<b>2001/348</b>	. . . {with tracks oriented transverse to propulsive direction}
<b>2001/165</b>	. . . . {Hubless propellers, e.g. peripherally driven shrouds with blades projecting from the shrouds' inside surfaces}	<b>1/36</b>	. . swinging sideways, e.g. fishtail type

1/37	. . Moving-wave propellers, i.e. wherein the propelling means comprise a flexible undulating structure	2005/106	. . . . {with drive shafts of second or further propellers co-axially passing through hub of first propeller, e.g. counter-rotating tandem propellers with co-axial drive shafts}
1/38	. characterised solely by flotation properties, e.g. drums	5/125	. . movably mounted with respect to hull, e.g. adjustable in direction {, e.g. podded azimuthing thrusters} ({outboard units or Z-drives <a href="#">B63H 20/00</a> ; } movably mounted for steering purposes only, {rudders carrying propellers} <a href="#">B63H 25/42</a> )
<b>3/00</b>	<b>Propeller-blade pitch changing</b> {(aircraft propellers <a href="#">B64C 11/30</a> ; rotors of turbines <a href="#">F01D 7/00</a> ; axial wind motors <a href="#">F03D 7/022</a> ; axial-flow pumps <a href="#">F04D 29/00</a> )}	5/1252	. . . {the ability to move being conferred by gearing in transmission between prime mover and propeller and the propulsion unit being other than in a "Z" configuration}
3/002	. {with individually adjustable blades}	2005/1254	. . . {Podded azimuthing thrusters, i.e. podded thruster units arranged inboard for rotation about vertical axis}
2003/004	. {comprising means for locking blades in position}	2005/1256	. . . . {with mechanical power transmission to propellers}
2003/006	. {Detecting or transmitting propeller-blade pitch angle}	2005/1258	. . . . {with electric power transmission to propellers, i.e. with integrated electric propeller motors}
3/008	. {characterised by self-adjusting pitch, e.g. by means of springs, centrifugal forces, hydrodynamic forces}	5/14	. . characterised by being mounted in non-rotating ducts or rings, e.g. adjustable for steering purpose (shrouding ring attached to blades <a href="#">B63H 1/16</a> ; jet propulsion <a href="#">B63H 11/00</a> )
3/02	. actuated by control element coaxial with propeller shaft, e.g. the control element being rotary {( <a href="#">B63H 3/002</a> takes precedence, fluid actuated <a href="#">B63H 3/081</a> )}	5/15	. . . Nozzles, e.g. Kort-type
3/04	. . the control element being reciprocable	5/16	. . characterised by being mounted in recesses; with stationary water-guiding elements; Means to prevent fouling of the propeller, e.g. guards, cages or screens ( <a href="#">anti-fouling paints C09D 5/16</a> )
3/06	. characterised by use of non-mechanical actuating means, e.g. electrical ( <a href="#">B63H 3/002</a> takes precedence)	5/165	. . . {Propeller guards, line cutters or other means for protecting propellers or rudders}
3/08	. . fluid	5/18	. . of emergency propellers, e.g. arranged at the side of the vessel
3/081	. . . {actuated by control element coaxial with the propeller shaft}	5/20	. . . movable from a working position to a non-working position {(movable arrangements of propellers in general <a href="#">B63H 5/125</a> ; outboard propulsion units in general <a href="#">B63H 20/00</a> ; steering or dynamic anchoring by propellers used therefore only, or by rudders carrying propellers <a href="#">B63H 25/42</a> )}
3/082	. . . . {the control element being axially reciprocable}	<b>7/00</b>	<b>Arrangements of propulsive devices directly acting on air</b> (jet propulsion <a href="#">B63H 11/00</a> )
2003/084	. . . . . {with annular cylinder and piston}	7/02	. using propellers (air-screws of aircraft type <a href="#">B64C</a> )
2003/085	. . . . . {the control element having means for preventing rotation together with the propeller}	<b>9/00</b>	<b>Propulsive devices directly acted on by wind; Arrangements thereof</b> (air driven propellers driving underwater propulsive elements <a href="#">B63H 13/00</a> )
2003/087	. . . {using gaseous fluids, e.g. steam or air}	9/02	. using Magnus effect
2003/088	. . . {characterised by supply of fluid actuating medium to control element, e.g. of hydraulic fluid to actuator co-rotating with the propeller}	9/04	. using sails or like wind-catching surfaces (sailing sledges or ice boats <a href="#">B62B 15/00</a> {; masts for sailing boats <a href="#">B63B 15/0083</a> ; sail arrangements for wind-driven boards <a href="#">B63B 35/7973</a> )}
3/10	. characterised by having pitch control conjoint with propulsion plant control	9/06	. . Construction or types of sails; Arrangements thereof on vessels
3/12	. the pitch being adjustable only when propeller is stationary ( <a href="#">B63H 3/002</a> takes precedence)	9/0607	. . . {Rigid or aerofoil type sails}
<b>5/00</b>	<b>Arrangements on vessels of propulsion elements directly acting on water</b>	9/0614	. . . . {Inflatable aerofoil sails}
2005/005	. {Front propulsors, i.e. propellers, paddle wheels, or the like substantially arranged ahead of the vessels' midship section}	2009/0621	. . . . {Rigid sails comprising one or more pivotally supported panels}
5/02	. of paddle wheels, e.g. of stern wheels	2009/0628	. . . . . {the panels being pivotable about horizontal axes}
2005/025	. . {of Voith Schneider type}	2009/0635	. . . . . {the panels being pivotable about vertical axes}
5/03	. . movably mounted with respect to the hull, e.g. having means to reposition paddle wheel assembly, or to retract paddle or to change paddle attitude	9/0642	. . . {Sail battens}
5/04	. . with stationary water-guiding elements		
5/07	. of propellers (forming part of outboard units {or Z-drives} <a href="#">B63H 20/00</a> )		
2005/075	. . {using non-azimuthing podded propulsor units, i.e. podded units without means for rotation about a vertical axis, e.g. rigidly connected to the hull}		
5/08	. . of more than one propeller		
5/10	. . . of coaxial type, e.g. of counter-rotative type		
2005/103	. . . . {of co-rotative type, i.e. rotating in the same direction, e.g. twin propellers}		

- 2009/065 . . . . {with variable rigidity, e.g. inflatable}
- 9/0657 . . . {Construction of sails (sails with detachable sections [B63B 35/7983](#))}
- 2009/0664 . . . . {of spinnakers, gennakers, or the like balloon sails}
- 2009/0671 . . . . {of molded sails, i.e. of sails manufactured by shaping deformable material on molds, e.g. thermoplastic film on heatable molds; Methods of manufacturing molded sails}
- 2009/0678 . . . . {of laminated sails with oriented fibres, i.e. fibres or filaments arranged along predefined lines substantially parallel to the principal stress trajectories; Methods of manufacturing therefor}
- 9/0685 . . . {Sails pivotally mounted at a mast-tip; Kite sails ([B63B 35/7976](#) takes precedence)}
- 2009/0692 . . . . {Methods, or means specially adapted for controlling kite sails, e.g. control bars, harnesses, automated control units, or methods of their use}
- 9/08 . . Connections of sails to masts, spars, or the like
- 2009/082 . . . {Booms, or the like}
- 2009/084 . . . {Gooseneck bearings, i.e. bearings for pivotal support of booms on masts}
- 2009/086 . . . {by sliders, i.e. by shoes sliding in, or guided by channels, tracks or rails; , for connecting luffs, leeches, battens, or the like to masts, spars or booms}
- 2009/088 . . . {Means for tensioning sheets, or other running rigging, adapted for being guided on rails, or the like mounted on deck, e.g. travellers or carriages with pulleys}
- 9/10 . . . Running rigging, e.g. reefing equipment ([staying of masts B63B 15/02](#))
- 9/1007 . . . . {Trapeze systems (harnesses for windsurfers [B63B 35/7993](#))}
- 9/1014 . . . . . {with elastic connection to harnesses}
- 9/1021 . . . . . {Reefing}
- 9/1028 . . . . . {by furling around stays}
- 9/1035 . . . . . {by furling around or inside the mast}
- 9/1042 . . . . . {by furling around or inside the boom}
- 2009/105 . . . . . {using drives for actuating reefing mechanism, e.g. roll reefing drives}
- 2009/1057 . . . . . {using sheaves being friction driven by endless ropes or by ropes having two free ends}
- 2009/1064 . . . . . {using drums driven by winding or unwinding single ropes onto or from the drums}
- 9/1071 . . . . {Spinnaker poles or rigging, e.g. combined with spinnaker handling}
- 9/1078 . . . . {Boom brakes}
- 9/1085 . . . . {Boom vang}
- 9/1092 . . . . {Means for stowing, or securing sails when not in use ([B63H 9/1021](#) takes precedence)}
- 11/00** **Effecting propulsion by jets, i.e. reaction principle (steering by {auxiliary} jet action, {rudders carrying jets} [B63H 25/46](#); power plant per se, see the relevant classes)**
- 2011/002 . . {using Coanda effect, i.e. the tendency of fluid jets to be attracted to nearby surfaces}
- 2011/004 . . {using the eductor or injector pump principle, e.g. jets with by-pass fluid paths}
- 2011/006 . . {with propulsive medium supplied from sources external to propelled vessel, e.g. water from public water supply}
- 2011/008 . . {Arrangements of two or more jet units}
- 11/01 . . having means to prevent foreign material from clogging fluid passage way
- 11/02 . . the propulsive medium being ambient water
- 11/025 . . {by means of magneto-hydro-dynamic forces}
- 11/04 . . by means of pumps
- 2011/043 . . . {with means for adjusting or varying pump inlets, e.g. means for varying inlet cross section area}
- 2011/046 . . . {comprising means for varying pump characteristics, e.g. rotary pumps with variable pitch impellers, or adjustable stators}
- 11/06 . . . of reciprocating type
- 11/08 . . . of rotary type
- 2011/081 . . . . {with axial flow, i.e. the axis of rotation being parallel to the flow direction}
- 2011/082 . . . . {with combined or mixed flow, i.e. the flow direction being a combination of centrifugal flow and non-centrifugal flow, e.g. centripetal or axial flow}
- 2011/084 . . . . . {with two or more pump stages}
- 2011/085 . . . . . {having counter-rotating impellers}
- 2011/087 . . . . . {with radial flow}
- 2011/088 . . . . . {using shear forces, e.g. disc pumps or Tesla pumps}
- 11/09 . . . by means of pressure pulses applied to a column of liquid, e.g. by ignition of an air/gas or vapour mixture
- 11/10 . . having means for deflecting jet or influencing cross-section thereof
- 11/101 . . . {having means for deflecting jet into a propulsive direction substantially parallel to the plane of the pump outlet opening}
- 11/102 . . . . {the inlet opening and the outlet opening of the pump being substantially coplanar}
- 11/103 . . . having means to increase efficiency of propulsive fluid, e.g. discharge pipe provided with means to improve the fluid flow
- 11/107 . . . Direction control of propulsive fluid ([B63H 11/101](#) takes precedence)}
- 11/11 . . . . with bucket or clamshell-type reversing means
- 11/113 . . . . Pivoted outlet
- 11/117 . . . . Pivoted vane
- 11/12 . . the propulsive medium being steam or other gas
- 11/14 . . the gas being produced by combustion
- 11/16 . . the gas being produced by other chemical processes
- 13/00** **Effecting propulsion by wind motors driving water-engaging propulsive elements**
- 15/00** **Effecting propulsion by use of vessel-mounted driving mechanisms co-operating with anchored chains or the like**
- 16/00** **Effecting propulsion by muscle power (swimming frameworks, {i.e. apparatus fixed to or held by the swimmer or diver} with swimmer-operated driving mechanisms [A63B 35/00](#); land-based training equipment for rowing or sculling [A63B 69/06](#))**

2016/005	. {used on vessels dynamically supported, or lifted out of the water by hydrofoils}	2016/202	. . . {specially adapted or arranged for being actuated by the feet of the user, e.g. using bicycle-like pedals}
16/02	. Movable thwarts; Footrests	2016/205	. . . . {making use of standard bicycles}
16/04	. Oars; Sculls; Paddles; Poles	2016/207	. . . . . {without wheels}
2016/043	. . {Stop sleeves or collars for positioning oars in rowlocks, e.g. adjustable}		
2016/046	. . {Oars for single-oar sculling, i.e. for propelling boats by swinging single stern-mounted oars from side to side; Use or arrangements thereof on boats}	<b>19/00</b>	<b>Effecting propulsion of vessels, not otherwise provided for</b>
16/06	. Rowlocks; Mountings therefor	19/02	. by using energy derived from movement of ambient water, e.g. from rolling or pitching of vessels
2016/063	. . {Rowlocks mounted on movable support structures}	19/04	. . propelled by water current
16/067	. . Rowlocks mounted on a structure extending beyond the gunwale of the vessel	19/06	. by discharging gas into ambient water ( <a href="#">with jet action B63H 11/12</a> ; for reducing surface friction <a href="#">B63B 1/38</a> )
16/073	. . having oar shaft restraining means	19/08	. by direct engagement with water-bed or ground
16/08	. Other apparatus for converting muscle power into propulsive effort ( <a href="#">general features of propulsion elements, see the relevant groups</a> )	<b>20/00</b>	<b>Outboard propulsion units, i.e. propulsion units having a substantially vertical power leg mounted outboard of a hull and terminating in a propulsion element, e.g. "outboard motors", Z-drives {with level bridging shaft arranged substantially outboard} (power plants <a href="#">per se</a>, <a href="#">see the relevant classes</a>); Arrangements thereof on vessels {(transom panels for outboard motors on inflatable boats <a href="#">B63B 7/087</a>; tug-type floating propeller units <a href="#">B63B 35/665</a>; rudders carrying propellers <a href="#">B63H 25/42</a>; rudders carrying jets <a href="#">B63H 25/46</a>; engines of outboard propulsion units <a href="#">F02B 61/045</a>)}</b>
2016/085	. . {comprising means for transmitting muscular power applied in oscillatory or rotary manner to a rotary input shaft of a reversing transmission, e.g. alternatively allowing for ahead or astern propulsion}	20/001	. {Arrangements, apparatus and methods for handling fluids used in outboard drives (for handling exhaust gas <a href="#">B63H 20/24</a> ; for handling cooling-water <a href="#">B63H 20/28</a> ; cooling outboard marine engines <a href="#">F01P 3/202</a> ; air intakes for outboard marine engines <a href="#">F02M 35/167</a> )}
16/10	. . for bow-facing rowing	20/002	. . {for handling lubrication liquids (in engines, e.g. outboard marine engines, <a href="#">F01M</a> )}
16/102	. . . {by using an inverting mechanism between the handgrip and the blade, e.g. a toothed transmission}	2020/003	. {Arrangements of two, or more outboard propulsion units}
16/105	. . . . {the mechanism having articulated rods}	2020/005	. {Arrangements of two or more propellers, or the like on single outboard propulsion units}
16/107	. . . {by placing the fulcrum outside the segment defined by handgrip and blade}	2020/006	. . {of coaxial type, e.g. of counter-rotative type}
16/12	. . {using hand levers, cranks, pedals, or the like, e.g. water cycles, boats propelled by boat-mounted pedal cycles}	20/007	. {Trolling propulsion units (trolling plates for slowing down <a href="#">B63H 25/50</a> ; dynamo-electric machines of trolling units <a href="#">H02K</a> )}
	<b><u>WARNING</u></b>	2020/008	. {Tools, specially adapted for maintenance, mounting, repair, or the like of outboard propulsion units, e.g. of outboard motors or Z-drives}
	This group is no longer used for classification of new documents as from 01.01.2012. The backlog of this group is being continuously reclassified to groups <a href="#">B63H 16/16</a> - <a href="#">B63H 16/20</a>	20/02	. Mounting of propulsion units ( <a href="#">B63H 20/08</a> takes precedence)
16/14	. . . {for propelled drive}	2020/025	. . {Sealings specially adapted for mountings of outboard drive units; Arrangements thereof, e.g. for transom penetrations}
	<b><u>WARNING</u></b>	20/04	. . in a well
	This group is no longer used for classification of new documents as from 01.01.2012. The backlog of this group is being continuously reclassified to groups <a href="#">B63H 16/16</a> - <a href="#">B63H 16/20</a>	20/06	. . on an intermediate support
16/16	. . using reciprocating pull cable, i.e. a strand-like member movable alternately backward and forward	20/08	. Means enabling movement of the position of the propulsion element, e.g. for trim, tilt, or steering ( <a href="#">transmissions allowing movement of the propulsion element B63H 20/14</a> ; Control of trim or tilt ( <a href="#">initiating means for steering B63H 25/02</a> ))
2016/165	. . . {comprising means for transforming oscillating movement into rotary movement, e.g. for driving propeller shafts}	20/10	. . Means enabling trim or tilt, or lifting of the propulsion element when an obstruction is hit; Control of trim or tilt
16/18	. . using sliding {or pivoting} handle or pedal, i.e. the motive force being transmitted to a propelling means by means of a lever operated by the hand or foot of the occupant	2020/103	. . . {using a flexible member for enabling or controlling tilt or lifting, e.g. a cable}
2016/185	. . . {comprising means for transforming oscillating movement into rotary movement, e.g. for driving propeller shafts}		
16/20	. . using rotary cranking arm		



20/106	. . . {Means enabling lifting of the propulsion element in a substantially vertical, linearly sliding movement}	2021/003	. {the power plant using fuel cells for energy supply or accumulation, e.g. for buffering photovoltaic energy}
20/12	. . Means enabling steering	2021/006	. {the vessel being driven by hot gas positive-displacement engine plants of closed-cycle type, e.g. Stirling engines}
20/14	. Transmission between propulsion power unit and propulsion element	21/02	. the vessels being steam-driven ( <a href="#">B63H 21/18</a> takes precedence)
2020/145	. . {comprising means for permitting telescoping movement of components of the outboard propulsion unit, e.g. telescoping movement of power leg}	21/04	. . relating to positive-displacement steam engines
20/16	. . allowing movement of the propulsion element in a horizontal plane only, e.g. for steering	21/06	. . relating to steam turbines
20/18	. . allowing movement of the propulsion element about a longitudinal axis, e.g. the through transom shaft ( <a href="#">B63H 20/22</a> takes precedence)	21/08	. . relating to steam boilers
20/20	. . with provision for reverse drive	21/10	. . relating to condensers or engine-cooling fluid heat-exchangers
20/22	. . allowing movement of the propulsion element about at least a horizontal axis without disconnection of the drive, e.g. using universal joints	21/12	. the vessels being motor-driven ( <a href="#">B63H 21/175</a> , <a href="#">B63H 21/18</a> take precedence; {cooling circuits with liquid-to-liquid heat-exchange relative to marine vessels <a href="#">F01P 3/207</a> })
20/24	. {Arrangements, apparatus and methods for handling exhaust gas in outboard drives, e.g.} exhaust gas outlets {(in engines, e.g. outboard marine engines, <a href="#">F01N</a> )}	<b>WARNING</b>	
20/245	. . {Exhaust gas outlets ( <a href="#">B63H 20/26</a> takes precedence)}	Group <a href="#">B63H 21/12</a> is no longer used for classification of vessels being motor-driven by electric motor, powered by land vehicle supported by vessel, and powered by nuclear energy. These documents are in the process of being reorganised to groups <a href="#">B63H 21/17</a> , <a href="#">B63H 21/175</a> , and <a href="#">B63H 21/18</a> respectively	
20/26	. . {Exhaust gas outlets} passing through the propeller or its hub	21/14	. . relating to internal-combustion engines {(of outboard type <a href="#">B63H 20/00</a> )}
20/28	. {Arrangements, apparatus and methods for handling cooling-water in outboard drives, e.g.} cooling-water intakes {(cooling circuits for outboard marine engines <a href="#">F01P 3/202</a> )}	21/16	. . relating to gas turbines
20/285	. . {Cooling-water intakes ( <a href="#">B63H 20/28</a> takes precedence)}	21/165	. . by hydraulic fluid motor, i.e. wherein a liquid under pressure is utilised to rotate the propelling means {(transmission from power plant or unit to propeller using fluid gearing per se <a href="#">B63H 23/26</a> )}
20/30	. . {Cooling-water intakes} for flushing {(circuits for flushing outboard marine engines <a href="#">F01P 3/205</a> )}	21/17	. . by electric motor (electrically-propelled vehicles <a href="#">B60L</a> ; Transmitting power from propulsion power plant to propulsive elements with electric gearing <a href="#">B63H 23/24</a> )}
20/32	. Housings {(air intakes for outboard engines <a href="#">F02M 35/167</a> )}	2021/171	. . . {making use of photovoltaic energy conversion, e.g. using solar panels}
2020/323	. . {Gear cases}	2021/173	. . . {making use of superconductivity}
2020/326	. . . {having a dividing plane substantially in plane with the axes of the transmission shafts}	21/175	. the vessel being powered by land vehicle supported by vessel
20/34	. . comprising stabilising fins {, foils, anticavitation plates, splash plates, or rudders (rudders carrying propellers <a href="#">B63H 25/42</a> ; rudders carrying jets <a href="#">B63H 25/46</a> )}	21/18	. the vessels being powered by nuclear energy
20/36	. Transporting or testing stands {(hand carts for transporting outboard units <a href="#">B62B</a> ; measuring torque <a href="#">G01L 3/00</a> , measuring thrust of propellers <a href="#">G01L 5/133</a> , testing in general <a href="#">G01M</a> ); Use of outboard propulsion units as pumps}; Protection of power legs {, e.g. when not in use}	21/20	. the vessels being powered by combinations of different types of propulsion units
21/00	<b>Use of propulsion power plant or units on vessels</b> (use of outboard propulsion units <a href="#">B63H 20/00</a> ; hull reinforcements for carrying propulsion power plant or units <a href="#">B63B 3/70</a> ; {propulsion of submarines <a href="#">B63G 8/08</a> ; } propulsion power plant or units per se, see the relevant classes)	2021/202	. . {of hybrid electric type}
	<b>NOTE</b>	2021/205	. . . {the second power unit being of the internal combustion engine type, or the like, e.g. a Diesel engine}
	This group comprises arrangements of propulsion power plant or units on vessels and to some extent it includes adaptations of such plant or units to facilitate such arrangements	2021/207	. . . {the second power unit being a gas turbine}
		21/21	. Control means for engine or transmission, specially adapted for use on marine vessels
		21/213	. . {Levers or the like for controlling the engine or the transmission, e.g. single hand control levers}
		2021/216	. . {using electric control means}
		21/22	. the propulsion power units being controlled from exterior of engine room, e.g. from navigation bridge; Arrangements of order telegraphs ({conjoint control of specific features of internal combustion engines and of propelling elements <a href="#">F02D</a> }; order telegraphs per se <a href="#">G08B 9/00</a> )
		21/24	. {the vessels being small craft, e.g. racing boats}

21/26	<ul style="list-style-type: none"> <li>• {of outboard type; Outboard propulsion power units movably installed for steering, reversing, tilting, or the like (transom panels for outboard motors for inflatable boats <a href="#">B63B 7/087</a>; floating propeller units <a href="#">B63B 35/665</a>)}</li> </ul> <p><b>WARNING</b></p> <p>Group <a href="#">B63H 21/26</a> and subgroups are no longer used for classification. Documents are in the process of being reorganised to <a href="#">B63H 5/125</a>, and subgroups, to <a href="#">B63H 20/00</a>, and subgroups, and to <a href="#">B63H 25/42</a></p>	21/386	<ul style="list-style-type: none"> <li>• {for handling lubrication liquids (in machines or engines in general <a href="#">F01M</a>)}</li> </ul>
21/265	<ul style="list-style-type: none"> <li>• . . . {Steering or control devices for outboards (steering by rudders <a href="#">B63H 25/06</a>; control handles for boats <a href="#">B63H 21/213</a>)}</li> </ul>	23/00	<p><b>Transmitting power from propulsion power plant to propulsive elements</b> (changing pitch or propellers <a href="#">B63H 3/00</a>; adaptation of transmission to allow adjustment in location or direction of propellers <a href="#">B63H 5/125</a>; transmission between wind motors and propulsive elements <a href="#">B63H 13/00</a>; in outboard propulsion units <a href="#">B63H 20/14</a>; adaptation of transmission to allow adjustment of location of propellers <a href="#">B63H 20/08</a>; {adaptations of transmissions to allow steering or dynamic anchoring by propellers carried on rudders <a href="#">B63H 25/42</a>; } for vehicles in general <a href="#">B60K</a>; driving auxiliary machinery <a href="#">B63J</a>; transmission elements <i>per se</i> <a href="#">F16</a>)</p>
21/28	<ul style="list-style-type: none"> <li>• . . . {Arrangements of transmission between propulsion power unit and propulsive element}</li> </ul>	2023/005	<ul style="list-style-type: none"> <li>• {using a drive acting on the periphery of a rotating propulsive element, e.g. on a dented circumferential ring on a propeller, or a propeller acting as rotor of an electric motor}</li> </ul>
21/30	<ul style="list-style-type: none"> <li>• Mounting of propulsion plant or unit, e.g. for anti-vibration purposes (hull reinforcements therefor <a href="#">B63B 3/70</a>; {of outboard propulsion units <a href="#">B63H 20/02</a>; } vibration in systems <a href="#">F16F</a>; engine beds <a href="#">F16M</a>)</li> </ul>	23/02	<ul style="list-style-type: none"> <li>• with mechanical gearing</li> </ul>
21/302	<ul style="list-style-type: none"> <li>• . . {with active vibration damping}</li> </ul>	2023/0208	<ul style="list-style-type: none"> <li>• . . {by means of endless flexible members}</li> </ul>
21/305	<ul style="list-style-type: none"> <li>• . . {with passive vibration damping}</li> </ul>	2023/0216	<ul style="list-style-type: none"> <li>• . . . {by means of belts, or the like}</li> </ul>
2021/307	<ul style="list-style-type: none"> <li>• . . {Arrangements, or mountings of propulsion power plant elements in modular propulsion power units, e.g. using containers}</li> </ul>	2023/0225	<ul style="list-style-type: none"> <li>• . . . . {of grooved belts, i.e. with one or more grooves in longitudinal direction of the belt}</li> </ul>
21/32	<ul style="list-style-type: none"> <li>• Arrangements of propulsion-unit exhaust uptakes; Funnels peculiar to vessels; {Small watercraft exhaust arrangements, e.g. under-water}, (engine exhausts in general <a href="#">F01N</a>; flue devices for furnaces in general <a href="#">F23J</a>; {exhaust gas outlets forming part of outboard propulsion units or Z-drives <a href="#">B63H 20/24</a>)}</li> </ul> <p><b>WARNING</b></p> <p>Group <a href="#">B63H 21/32</a> is no longer used for classification of documents dealing with gas exhaust outlets forming part of outboard propulsion units or Z-drives. Respective documents are in the process of being reorganised to groups <a href="#">B63H 20/24</a> and <a href="#">B63H 20/26</a></p>	2023/0233	<ul style="list-style-type: none"> <li>• . . . . {of belts having a toothed contact surface, or regularly spaced bosses, or hollows for slip-less or nearly slip-less meshing with complementary profiled contact surface of a pulley}</li> </ul>
21/34	<ul style="list-style-type: none"> <li>• . . having exhaust-gas deflecting means</li> </ul>	2023/0241	<ul style="list-style-type: none"> <li>• . . . . {of V-belts, i.e. belts of tapered cross section}</li> </ul>
21/36	<ul style="list-style-type: none"> <li>• Covers or casing arranged to protect plant or unit from marine environment ({Housings of outboard propulsion units <a href="#">B63H 20/32</a> } hull construction <a href="#">B63B 3/00</a>)</li> </ul>	2023/025	<ul style="list-style-type: none"> <li>• . . . {by means of chains}</li> </ul>
21/38	<ul style="list-style-type: none"> <li>• Apparatus or methods specially adapted for use on marine vessels, for handling power plant or unit liquids, e.g. lubricants, coolants, fuels or the like ({in outboard drives <a href="#">B63H 20/001</a>; } lubricating or cooling machines or engines in general <a href="#">F01</a> - <a href="#">F04</a>)</li> </ul> <p><b>WARNING</b></p> <p>This group and its subgroups are</p> <ul style="list-style-type: none"> <li>- systematically used for classification of documents published from 01.06.2010 onwards</li> <li>- not complete; for documents published before 01.06.2010, see <a href="#">B63B 2770/00</a></li> </ul>	2023/0258	<ul style="list-style-type: none"> <li>• . . {comprising gearings with variable gear ratio, other than reversing drives or trolling drives}</li> </ul>
21/383	<ul style="list-style-type: none"> <li>• . . {for handling cooling-water (in outboard drives <a href="#">B63H 20/28</a>; in machines or engines in general <a href="#">F01P 3/00</a>)}</li> </ul>	2023/0266	<ul style="list-style-type: none"> <li>• . . . {comprising gearings with automatically variable gear ratio, other than continuously variable transmissions or trolling drives}</li> </ul>
		2023/0275	<ul style="list-style-type: none"> <li>• . . . {comprising means for conveying rotary motion with continuously variable gear ratio, e.g. continuously variable transmissions using endless flexible members}</li> </ul>
		2023/0283	<ul style="list-style-type: none"> <li>• . . {using gears having orbital motion}</li> </ul>
		2023/0291	<ul style="list-style-type: none"> <li>• . . {Trolling gears, i.e. mechanical power transmissions comprising controlled slip clutches, e.g. for low speed propulsion}</li> </ul>
		23/04	<ul style="list-style-type: none"> <li>• . . the main transmitting element, e.g. shaft, being substantially vertical</li> </ul>
		23/06	<ul style="list-style-type: none"> <li>• . . for transmitting drive from a single propulsion power unit</li> </ul>
		2023/062	<ul style="list-style-type: none"> <li>• . . . {comprising means for simultaneously driving two or more main transmitting elements, e.g. drive shafts}</li> </ul>
		2023/065	<ul style="list-style-type: none"> <li>• . . . . {having means for differentially varying the speed of the main transmitting elements, e.g. of the drive shafts}</li> </ul>
		2023/067	<ul style="list-style-type: none"> <li>• . . . . {the elements being formed by two or more coaxial shafts, e.g. counter-rotating shafts}</li> </ul>
		23/08	<ul style="list-style-type: none"> <li>• . . with provision for reversing drive</li> </ul>
		23/10	<ul style="list-style-type: none"> <li>• . . for transmitting drive from more than one propulsion power unit (for synchronisation of propulsive elements <a href="#">B63H 23/28</a>)</li> </ul>
		23/12	<ul style="list-style-type: none"> <li>• . . . allowing combined use of the propulsion power units</li> </ul>

23/14	. . . . with unidirectional drive or where reversal is immaterial	25/005	. {Steering specially adapted for towing trains, tug-barge systems, or the like; Equipment or accessories therefor}
23/16	. . . . characterised by provision of reverse drive	25/02	. Initiating means for steering {, for slowing down, otherwise than by use of propulsive elements, or for dynamic anchoring}
23/18	. . . for alternative use of the propulsion power units	25/022	. . {Steering wheels; Posts for steering wheels}
23/20	. . . . with separate forward and astern propulsion power units, e.g. turbines	25/024	. . {Handle-bars; Posts for supporting handle-bars, e.g. adjustable posts}
23/22	. with non-mechanical gearing	25/026	. . {using multi-axis control levers, or the like, e.g. joysticks, wherein at least one degree of freedom is employed for steering, slowing down, or dynamic anchoring}
23/24	. . electric {(dynamo-electric machines H02K)}	25/028	. . {using remote control means, e.g. wireless control; Equipment or accessories therefor}
2023/245	. . . {with two or more electric motors directly acting on a single drive shaft, e.g. plurality of electric rotors mounted on one common shaft, or plurality of electric motors arranged coaxially one behind the other with rotor shafts coupled together}	25/04	. . automatic, e.g. reacting to compass
23/26	. . fluid	25/045	. . . {making use of satellite radio beacon positioning systems, e.g. the Global Positioning System [GPS]}
23/28	. with synchronisation of propulsive elements	25/06	. Steering by rudders (by rudders carrying propellers B63H 25/42)
23/30	. characterised by use of clutches	25/063	. . {Arrangements of rudders forward of the propeller position, e.g. of backing rudders; Arrangements of rudders on the forebody of the hull; Steering gear therefor}
2023/305	. . {using fluid or semifluid as power transmitting means}	25/066	. . {Arrangements of two or more rudders; Steering gear therefor}
23/32	. Other parts	25/08	. . Steering gear
23/321	. . {Bearings or seals specially adapted for propeller shafts}	25/10	. . . with mechanical transmission
2023/322	. . . {Intermediate propeller shaft bearings, e.g. with provisions for shaft alignment}	25/12	. . . with fluid transmission
2023/323	. . . {Bearings for coaxial propeller shafts, e.g. for driving propellers of the counter-rotative type}	25/14	. . . power assisted; power driven, i.e. using steering engine
2023/325	. . . {Thrust bearings, i.e. axial bearings for propeller shafts}	25/16	. . . . with alternative muscle or power operated steering
23/326	. . . {Water lubricated bearings}	25/18	. . . . Transmitting of movement of initiating means to steering engine
2023/327	. . . {Sealings specially adapted for propeller shafts or stern tubes}	25/20	. . . . . by mechanical means
2023/328	. . {Marine transmissions characterised by the use of brakes, other than propeller shaft brakes; Brakes therefor}	25/22	. . . . . by fluid means
23/34	. . Propeller shafts; Paddle-wheel shafts; Attachment of propellers on shafts (shafts in general F16C; attachment of a member on a shaft in general F16D 1/06)	25/24	. . . . . by electrical means
2023/342	. . . {comprising couplings, e.g. resilient couplings; Couplings therefor}	25/26	. . . . . Steering engines
2023/344	. . . {comprising flexible shafts members}	25/28	. . . . . of fluid type
2023/346	. . . {comprising hollow shaft members}	25/30	. . . . . hydraulic
2023/348	. . . {with turning or inching gear, i.e. with means for slowly rotating, or for angularly positioning of shafts or propulsive elements mounted thereon}	25/32	. . . . . steam
23/35	. . . Shaft braking or locking, i.e. means to slow or stop the rotation of the propeller shaft or to prevent the shaft from initial rotation	25/34	. . . . . Transmitting of movement of engine to rudder, e.g. using quadrants, brakes
23/36	. . Shaft tubes (propeller-shaft tunnels B63B 11/06; shaft-tube seals F16J)	25/36	. . Rudder-position indicators
25/00	<b>Steering; Slowing-down otherwise than by use of propulsive elements (using adjustably-mounted propeller ducts or rings for steering B63H 5/14; using movably-installed outboard propulsion units B63H 20/00); Dynamic anchoring, i.e. positioning vessels by means of main or auxiliary propulsive elements (anchoring, other than dynamic B63B 21/00; equipment to decrease pitch, roll or like unwanted vessel movements by auxiliary jets or propellers B63B 39/08; {systems for waterborne vessel position control G05, e.g. G05D 1/00})</b>	25/38	. . Rudders (stern posts B63B 3/40 {; rudders mounted on housing of outboard motors B63H 20/34; rudders carrying propellers B63H 25/42; rudders carrying jets B63H 25/46))
		25/381	. . . {with flaps}
		25/382	. . . {movable otherwise than for steering purposes; Changing geometry}
		25/383	. . . . {with deflecting means able to reverse the water stream direction}
		25/384	. . . . . {with means for retracting or lifting}
		25/385	. . . . . {by pivoting}
		25/386	. . . . . {by sliding, e.g. telescopic}
		25/387	. . . {comprising two or more rigidly interconnected mutually spaced blades pivotable about a common rudder shaft, e.g. parallel twin blades mounted on a pivotable supporting frame}
		25/388	. . . {with varying angle of attack over the height of the rudder blade, e.g. twisted rudders}

## B63H

- 25/40
  - . . . using Magnus effect
- 25/42
  - . Steering or dynamic anchoring by propulsive elements (by jets [B63H 25/46](#)); Steering or dynamic anchoring by propellers used therefor only; Steering or dynamic anchoring by rudders carrying propellers
- 2025/425
  - . . {Propulsive elements, other than jets, substantially used for steering or dynamic anchoring only, with means for retracting, or otherwise moving to a rest position outside the water flow around the hull}
- 25/44
  - . Steering or slowing-down by extensible flaps or the like
- 25/46
  - . Steering or dynamic anchoring by jets {or by rudders carrying jets (steering or dynamic anchoring by deflecting or directing main propulsion jets [B63H 11/00](#))}
- 2025/465
  - . . {Jets or thrusters substantially used for steering or dynamic anchoring only, with means for retracting, or otherwise moving to a rest position outside the water flow around the hull}
- 25/48
  - . Steering or slowing-down by deflection of propeller slipstream otherwise than by rudder
- 25/50
  - . Slowing-down means not otherwise provided for
- 25/52
  - . Parts for steering not otherwise provided for