

# CPC COOPERATIVE PATENT CLASSIFICATION

## Y GENERAL TAGGING OF NEW TECHNOLOGICAL DEVELOPMENTS; GENERAL TAGGING OF CROSS-SECTIONAL TECHNOLOGIES SPANNING OVER SEVERAL SECTIONS OF THE IPC; TECHNICAL SUBJECTS COVERED BY FORMER USPC CROSS-REFERENCE ART COLLECTIONS [XRACs] AND DIGESTS

(NOTES omitted)

## Y02 TECHNOLOGIES OR APPLICATIONS FOR MITIGATION OR ADAPTATION AGAINST CLIMATE CHANGE

(NOTES omitted)

## Y02P CLIMATE CHANGE MITIGATION TECHNOLOGIES IN THE PRODUCTION OR PROCESSING OF GOODS

### NOTE

This subclass covers climate change mitigation technologies in any kind of industrial processing or production activity, including the agroalimentary industry, agriculture, fishing, ranching and the like.

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| <b>10/00</b> | <b>Technologies related to metal processing</b>  | 20/59        | . . Biological synthesis; Biological purification  |
| 10/10        | . Reduction of greenhouse gas [GHG] emissions  | <b>30/00</b> | <b>Technologies relating to oil refining and petrochemical industry</b>  |
| 10/122       | . . by capturing or storing CO <sub>2</sub>  | 30/20        | . using bio-feedstock  |
| 10/134       | . . by avoiding CO <sub>2</sub> , e.g. using hydrogen  | 30/40        | . Ethylene production  |
| 10/143       | . . of methane [CH <sub>4</sub> ]  | <b>40/00</b> | <b>Technologies relating to the processing of minerals</b>   |
| 10/146       | . . Perfluorocarbons [PFC]; Hydrofluorocarbons [HFC]; Sulfur hexafluoride [SF <sub>6</sub> ]                     | 40/10        | . Production of cement, e.g. improving or optimising the production methods; Cement grinding                                       |
| 10/20        | . Recycling  | 40/121       | . . Energy efficiency measures, e.g. improving or optimising the production methods  |
| 10/25        | . Process efficiency   | 40/125       | . . Fuels from renewable energy sources, e.g. waste or biomass   |
| 10/32        | . using renewable energy sources   | 40/18        | . . Carbon capture and storage [CCS]   |
| <b>20/00</b> | <b>Technologies relating to chemical industry</b>  | 40/40        | . Production or processing of lime, e.g. limestone regeneration of lime in pulp and sugar mills                                    |
| 20/10        | . Process efficiency   | 40/45        | . . using fuels from renewable energy sources  |
| 20/129       | . . Energy recovery, e.g. by cogeneration, H <sub>2</sub> recovery or pressure recovery turbines                 | 40/50        | . Glass production, e.g. reusing waste heat during processing or shaping   |
| 20/133       | . . Renewable energy sources, e.g. sunlight  | 40/57        | . . Improving the yield, e.g. reduction of reject rates  |
| 20/141       | . Feedstock  | 40/60        | . Production of ceramic materials or ceramic elements, e.g. substitution of clay or shale by alternative raw materials, e.g. ashes |
| 20/143       | . . the feedstock being recycled material, e.g. plastics   | <b>60/00</b> | <b>Technologies relating to agriculture, livestock or agroalimentary industries</b>  |
| 20/145       | . . the feedstock being materials of biological origin   | 60/12        | . using renewable energies, e.g. solar water pumping   |
| 20/151       | . Reduction of greenhouse gas [GHG] emissions, e.g. CO <sub>2</sub>  | 60/14        | . Measures for saving energy, e.g. in green houses   |
| 20/155       | . . Perfluorocarbons [PFC]; Hydrofluorocarbons [HFC]; Hydrochlorofluorocarbons [HCFC]; Chlorofluorocarbons [CFC] | 60/20        | . Reduction of greenhouse gas [GHG] emissions in agriculture, e.g. CO <sub>2</sub>   |
| 20/156       | . . Methane [CH <sub>4</sub> ]   | 60/21        | . . Dinitrogen oxide [N <sub>2</sub> O], e.g. using aquaponics, hydroponics or efficiency measures                                 |
| 20/20        | . Improvements relating to chlorine production   | 60/22        | . . Methane [CH <sub>4</sub> ], e.g. from rice paddies   |
| 20/30        | . Improvements relating to adipic acid or caprolactam production   | 60/30        | . Land use policy measures   |
| 20/40        | . Improvements relating to fluorochloro hydrocarbon, e.g. chlorodifluoromethane [HCFC-22] production             | 60/40        | . Afforestation or reforestation   |
| 20/50        | . Improvements relating to the production of bulk chemicals  | 60/50        | . Livestock or poultry management  |
| 20/52        | . . using catalysts, e.g. selective catalysts  | 60/52        | . . use of renewable energies  |
| 20/54        | . . using solvents, e.g. supercritical solvents or ionic liquids   | 60/60        | . Fishing; Aquaculture; Aquafarming  |
| 20/55        | . . Design of synthesis routes, e.g. reducing the use of auxiliary or protecting groups                          |              |  |
| 20/582       | . . Recycling of unreacted starting or intermediate materials  |              |  |
| 20/584       | . . Recycling of catalysts   |              |  |

- 60/80 . Food processing, e.g. use of renewable energies or variable speed drives in handling, conveying or stacking
- 60/85 . . Food storage or conservation, e.g. cooling or drying
- 60/87 . . Re-use of by-products of food processing for fodder production
- 70/00 Climate change mitigation technologies in the production process for final industrial or consumer products**
- 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
- 70/50 . Manufacturing or production processes characterised by the final manufactured product
- 70/62 . . related technologies for production or treatment of textile or flexible materials or products thereof, including footwear
- 80/00 Climate change mitigation technologies for sector-wide applications**
- 80/10 . Efficient use of energy, e.g. using compressed air or pressurized fluid as energy carrier
- 80/14 . . District level solutions, i.e. local energy networks
- 80/15 . . On-site combined power, heat or cool generation or distribution, e.g. combined heat and power [CHP] supply
- 80/20 . using renewable energy
- 80/30 . Reducing waste in manufacturing processes; Calculations of released waste quantities
- 80/40 . Minimising material used in manufacturing processes
- 90/00 Enabling technologies with a potential contribution to greenhouse gas [GHG] emissions mitigation**
- 90/02 . Total factory control, e.g. smart factories, flexible manufacturing systems [FMS] or integrated manufacturing systems [IMS]
- 90/30 . Computing systems specially adapted for manufacturing
- 90/40 . Fuel cell technologies in production processes
- 90/45 . Hydrogen technologies in production processes
- 90/50 . Energy storage in industry with an added climate change mitigation effect
- 90/60 . Electric or hybrid propulsion means for production processes
- 90/70 . Combining sequestration of CO<sub>2</sub> and exploitation of hydrocarbons by injecting CO<sub>2</sub> or carbonated water in oil wells
- 90/80 . Management or planning
- 90/82 . . Energy audits or management systems therefor
- 90/84 . . Greenhouse gas [GHG] management systems
- 90/845 . . . Inventory and reporting systems for greenhouse gases [GHG]
- 90/90 . Financial instruments for climate change mitigation, e.g. environmental taxes, subsidies or financing
- 90/95 . . CO<sub>2</sub> emission certificates or credits trading