

CPC**COOPERATIVE PATENT CLASSIFICATION****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.

Y02P 10/00**Technologies related to metal processing**

Y02P 10/10

- Reduction of greenhouse gas [GHG] emissions

Y02P 10/12

- • CO₂

Y02P 10/122

- • • by capturing CO₂

Y02P 10/124

- • • • Recycling of CO₂-rich gas

Y02P 10/126

- • • • Recycling of CO₂-lean gas

Y02P 10/128

- • • • Oxycombustion

Y02P 10/13

- • • • Post-combustion

Y02P 10/132

- • • • CO₂ storage

Y02P 10/134

- • • by CO₂ avoidance

Y02P 10/136

- • • • using hydrogen, e.g. H₂

Y02P 10/138

- • • • Electrolysis

Y02P 10/14

- • Greenhouse gases [GHG] other than CO₂

Y02P 10/143

- • • Methane [CH₄]

Y02P 10/146

- • • Perfluorocarbons [PFC]; Hydrofluorocarbons [HFC]; Sulfur hexafluoride [SF₆]

Y02P 10/20

- Process efficiency

Y02P 10/21

- • by recovering materials

Y02P 10/212

- • • Recovering metals from waste

Y02P 10/214

- • • • by pyro metallurgy

Y02P 10/216

- • • • • of Fe

Y02P 10/218

- • • • • of Al

Y02P 10/22

- • • • • of Cu

Y02P 10/224

- • • • • of Co or Ni

Y02P 10/226

- • • • • of Mg

Y02P 10/228

- • • • • of Sn

Y02P 10/23

- • • • • of refractory metals

Y02P 10/232

- • • • • of Zn or ZnO

Y02P 10/234

- • • • by hydro metallurgy

Y02P 10/236

- • • • • of Cu

Y02P 10/238

- • • • by means other than pyro metallurgy or hydro metallurgy

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| Y02P 10/24 | powder metallurgy |
| Y02P 10/242 | . . . Slag reuse in metallurgical processes |
| Y02P 10/25 | . . by increasing the energy efficiency of the process |
| Y02P 10/253 | . . . using induction furnaces |
| Y02P 10/256 | . . . Design or operational measures for increasing the efficiency of electric conversion |
| Y02P 10/259 | in electric arc furnaces |
| Y02P 10/262 | in electrolytic cells |
| Y02P 10/265 | . . . by heat recovery |
| Y02P 10/268 | with by-product gas in energy cycle |
| Y02P 10/271 | low temperature heat recovery |
| Y02P 10/274 | medium temperature heat recovery |
| Y02P 10/277 | high temperature heat recovery |
| Y02P 10/28 | using by-product gases |
| Y02P 10/283 | using water, e.g. for cooling |
| Y02P 10/286 | . . . by process control or by modelling |
| Y02P 10/29 | . . . Additive manufacturing |
| Y02P 10/292 | of casting moulds |
| Y02P 10/295 | of metals |
| Y02P 10/30 | . . characterised by the energy source |
| Y02P 10/32 | . . . the energy source being renewable |
| Y02P 10/34 | . . . Cogeneration with other industries |

Y02P 20/00**Technologies relating to chemical industry**

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|-------------|--|
| Y02P 20/10 | . General improvement of production processes causing greenhouse gases [GHG] emissions |
| Y02P 20/12 | . . Energy input |
| Y02P 20/121 | . . . Energy efficiency measures, e.g. energy management |
| Y02P 20/122 | characterised by the type of apparatus |
| Y02P 20/123 | Motor systems |
| Y02P 20/124 | Boilers, furnaces, lighting or vacuum systems |
| Y02P 20/125 | Process integration |
| Y02P 20/126 | Membrane separation |
| Y02P 20/127 | Reactive distillation |
| Y02P 20/128 | . . . Alternative fuel sources, e.g. for process heat or steam |
| Y02P 20/129 | . . . Energy recovery |
| Y02P 20/13 | Cogeneration |
| Y02P 20/131 | Pressure recovery turbines |
| Y02P 20/132 | H ₂ recovery |
| Y02P 20/133 | . . . Renewable energy sources |
| Y02P 20/134 | Sunlight |

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| Y02P 20/135 | Photoelectrochemical processes |
| Y02P 20/136 | of biological origin, e.g. biomass, biofuels, biogas |
| Y02P 20/14 | . . Reagents; Educts; Products |
| Y02P 20/141 | . . . Feedstock |
| Y02P 20/142 | the feedstock being CO ₂ |
| Y02P 20/143 | the feedstock being recycled plastics |
| Y02P 20/144 | to generate syngas, i.e. H ₂ + CO |
| Y02P 20/145 | the feedstock being materials of biological origin |
| Y02P 20/146 | . . . Changing the product type or product distribution |
| Y02P 20/147 | . . . Using materials efficiently |
| Y02P 20/148 | Recycling |
| Y02P 20/149 | Reduced process losses |
| Y02P 20/15 | Reduced transportation losses |
| Y02P 20/151 | . . . Reduction of greenhouse gas [GHG] emissions |
| Y02P 20/152 | CO ₂ |
| Y02P 20/153 | N ₂ O |
| Y02P 20/154 | Halogenated hydrocarbons |
| Y02P 20/155 | Perfluorocarbons [PFC]; Hydrofluorocarbons [HFC]; Hydrochlorofluorocarbons [HCFC]; Chlorofluorocarbons [CFC] |
| Y02P 20/156 | Methane [CH ₄] |
| Y02P 20/20 | . Improvements relating to chlorine production |
| Y02P 20/22 | . . Optimization of Deacon process |
| Y02P 20/224 | . . . by process design |
| Y02P 20/228 | . . . by improving the materials, e.g. gauze composition or structure |
| Y02P 20/30 | . Improvements relating to adipic acid or caprolactam production |
| Y02P 20/32 | . . Technologies aiming at reducing N ₂ O emissions |
| Y02P 20/324 | . . . by thermal destruction of N ₂ O |
| Y02P 20/328 | . . . by catalytic reduction of N ₂ O |
| Y02P 20/40 | . Improvements relating to chlorodifluoromethane [HCFC-22] production |
| Y02P 20/42 | . . Reducing fluoroform [HFC-23] emissions |
| Y02P 20/424 | . . . by capture and subsequent thermal oxidation |
| 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 |
| Y02P 20/51 | . . Bulk chemicals |
| Y02P 20/514 | . . . Aldehydes; Alcohols |
| Y02P 20/518 | . . . Hydrocyanation products, e.g. adipodinitrile |
| Y02P 20/52 | . . using catalysts, e.g. selective catalysts |
| Y02P 20/54 | . . characterised by the solvent |
| Y02P 20/542 | . . . the solvent being an ionic liquid |

- Y02P 20/544 . . . Supercritical solvents, e.g. supercritical H₂O or CO₂
- Y02P 20/546 . . . Mixtures of ionic liquids and supercritical solvents
- Y02P 20/55 . . Synthetic design, e.g. reducing the use of auxiliary or protecting groups
- Y02P 20/57 . . Efficient separation techniques
- Y02P 20/572 . . . Membranes
- Y02P 20/58 . . Recycling
- Y02P 20/582 . . . of unreacted starting or intermediate materials
- Y02P 20/584 . . . of catalysts
- Y02P 20/586 . . . of reagents, e.g. co-catalysts, adjuvants
- Y02P 20/588 . . . involving immobilised starting materials, reagents or catalysts
- Y02P 20/59 . . Biological synthesis; Biological purification

Y02P 30/00**Technologies relating to oil refining and petrochemical industry**

- Y02P 30/10 . Reduction of greenhouse gas [GHG] emissions during production processes
- Y02P 30/20 . Bio-feedstock
- Y02P 30/30 . Carbon capture or storage [CCS] specific to hydrogen production
- Y02P 30/40 . Ethylene production
- Y02P 30/42 . . using bio-feedstock
- Y02P 30/44 . . Cracking, e.g. steam cracking
- Y02P 30/442 . . . Furnace or cracking tube materials, e.g. chemical composition of the tubes; Controlling or regulating the tube furnaces
- Y02P 30/444 . . . Cogeneration using furnace exhaust
- Y02P 30/446 . . . Catalytic cracking
- Y02P 30/46 . . Separation
- Y02P 30/462 . . . using low temperature distillation
- Y02P 30/464 . . . using absorption or adsorption techniques
- Y02P 30/48 . . Compression

Y02P 40/00**Technologies relating to the processing of minerals**

- Y02P 40/10 . Production of cement
- Y02P 40/12 . . Clinker production
- Y02P 40/121 . . . Energy efficiency measures, e.g. improving or optimising the production methods
- Y02P 40/123 Integrated production plants
- Y02P 40/125 . . . Fuels from renewable energy sources
- Y02P 40/126 Waste
- Y02P 40/128 Biomass
- Y02P 40/14 . . Reduction of clinker content in cement
- Y02P 40/141 . . . Blended cements
- Y02P 40/143 Clinker replacement by slag
- Y02P 40/145 Clinker replacement by combustion residues

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| Y02P 40/146 | Clinker replacement by ground limestone |
| Y02P 40/148 | . . . Belite cements |
| Y02P 40/16 | . . Non-limestone based cements, e.g. alkali-activated cements |
| Y02P 40/165 | . . . Geopolymers |
| Y02P 40/18 | . . Carbon capture and storage [CCS] |
| Y02P 40/20 | . Cement grinding |
| Y02P 40/30 | . Manufacturing or processing of sand or stone |
| Y02P 40/40 | . Production or processing of lime |
| Y02P 40/42 | . . Limestone calcination |
| Y02P 40/44 | . . Regeneration of lime in pulp and sugar mills |
| Y02P 40/45 | . . using fuels from renewable energy sources |
| Y02P 40/47 | . . Reduction of lime consumption, e.g. in sugar industry |
| Y02P 40/49 | . . . Limestone grinding |
| Y02P 40/50 | . Glass production |
| Y02P 40/51 | . . Producing or shaping of glass |
| Y02P 40/52 | . . Use of cullet or other waste |
| Y02P 40/53 | . . Reusing waste heat during processing or shaping |
| Y02P 40/535 | . . . Regenerative heating |
| Y02P 40/55 | . . Oxy-fuel |
| Y02P 40/56 | . . Batch or cullet pre-heating |
| Y02P 40/57 | . . Reduction of reject rates; Improving the yield |
| Y02P 40/58 | . . Fuels from renewable energy sources |
| Y02P 40/59 | . . CO ₂ capture, e.g. for large oxy-fuel furnaces |
| Y02P 40/60 | . Production of ceramic materials or ceramic elements |
| Y02P 40/61 | . . Manufacturing of materials for construction e.g. beams, bricks or tiles |
| Y02P 40/615 | . . . Bricks made from lime and sand |
| Y02P 40/63 | . . Improving processing, storage or transport systems |
| Y02P 40/65 | . . Improving kilns |
| Y02P 40/67 | . . Fuels from renewable energy sources |
| Y02P 40/69 | . . Substitution of clay or shale by alternative raw materials, e.g. ashes |

Y02P 60/00**Technologies relating to agriculture, livestock or agroalimentary industries**

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| Y02P 60/10 | . Agricultural machinery or equipment |
| Y02P 60/12 | . . using renewable energies |
| Y02P 60/122 | . . . for irrigation, e.g. solar water pumping |
| Y02P 60/124 | . . . Collecting solar energy in greenhouses |
| Y02P 60/14 | . . Measures for saving energy |
| Y02P 60/141 | . . . in irrigation, i.e. motor control |
| Y02P 60/142 | . . . Reduction of fuel consumption |
| Y02P 60/144 | . . . Combined machines, e.g. seeder combined with fertilizers |

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| Y02P 60/146 | <ul style="list-style-type: none"> in greenhouses |
| Y02P 60/147 | <ul style="list-style-type: none"> Heating, ventilation or air conditioning |
| Y02P 60/148 | <ul style="list-style-type: none"> Constructive measures, e.g. light structures or improved insulation |
| Y02P 60/149 | <ul style="list-style-type: none"> Efficient lighting e.g. LED lighting |
| Y02P 60/15 | <ul style="list-style-type: none"> in preparing or milling grain |
| Y02P 60/16 | <ul style="list-style-type: none"> Machines for direct seeding, i.e. sod or grassland seeding |
| Y02P 60/18 | <ul style="list-style-type: none"> Activities not otherwise provided for, e.g. storage |
| Y02P 60/20 | <ul style="list-style-type: none"> Reduction of greenhouse gas [GHG] emissions in agriculture |
| Y02P 60/21 | <ul style="list-style-type: none"> N₂O |
| Y02P 60/212 | <ul style="list-style-type: none"> Reducing the use of fertilizers |
| Y02P 60/214 | <ul style="list-style-type: none"> Efficient applying machines |
| Y02P 60/215 | <ul style="list-style-type: none"> Efficient spraying methods |
| Y02P 60/216 | <ul style="list-style-type: none"> Aquaponics or hydroponics |
| Y02P 60/218 | <ul style="list-style-type: none"> use of additives, e.g. nitrification inhibitors, biochar |
| Y02P 60/22 | <ul style="list-style-type: none"> Reducing methane [CH₄] emissions from agricultural lands, e.g. from rice paddies |
| Y02P 60/23 | <ul style="list-style-type: none"> Reduction of CO₂ emissions from biota and soils |
| Y02P 60/24 | <ul style="list-style-type: none"> Enhancing carbon sequestration in biota and soils |
| Y02P 60/242 | <ul style="list-style-type: none"> Roof greening |
| Y02P 60/244 | <ul style="list-style-type: none"> Wall greening |
| Y02P 60/246 | <ul style="list-style-type: none"> Use of plant growth regulators to improve carbon dioxide up-take by crop plants |
| Y02P 60/247 | <ul style="list-style-type: none"> Plants with high carbon sequestration potential |
| Y02P 60/25 | <ul style="list-style-type: none"> Biomass with low greenhouse gas [GHG] emissions |
| Y02P 60/30 | <ul style="list-style-type: none"> Land use policy measures |
| Y02P 60/40 | <ul style="list-style-type: none"> Afforestation or reforestation |
| Y02P 60/50 | <ul style="list-style-type: none"> Livestock or poultry management |
| Y02P 60/52 | <ul style="list-style-type: none"> use of renewable energies |
| Y02P 60/521 | <ul style="list-style-type: none"> Solar lighting, e.g. for poultry |
| Y02P 60/524 | <ul style="list-style-type: none"> for pumping or supplying water to livestock |
| Y02P 60/526 | <ul style="list-style-type: none"> for electric energy supply |
| Y02P 60/528 | <ul style="list-style-type: none"> for electric livestock fences |
| Y02P 60/54 | <ul style="list-style-type: none"> Environmental control in livestock or poultry housing |
| Y02P 60/542 | <ul style="list-style-type: none"> using renewable energy |
| Y02P 60/56 | <ul style="list-style-type: none"> Methane [CH₄] capture |
| Y02P 60/60 | <ul style="list-style-type: none"> Fishing |
| Y02P 60/62 | <ul style="list-style-type: none"> Fishing equipment |
| Y02P 60/64 | <ul style="list-style-type: none"> Aquaculture; Aquafarming |
| Y02P 60/642 | <ul style="list-style-type: none"> combined with aquaponics or hydroponics |
| Y02P 60/70 | <ul style="list-style-type: none"> Apiculture |

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| Y02P 60/80 | <ul style="list-style-type: none"> Food processing |
| Y02P 60/81 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> Use of renewable energies or variable speed drives in handling, conveying or stacking |
| Y02P 60/83 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> Warming or cooking |
| Y02P 60/831 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> using steam |
| Y02P 60/833 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> using microwave ovens |
| Y02P 60/835 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> by boiling |
| Y02P 60/85 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> Food storage or conservation |
| Y02P 60/851 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> Cooling, refrigeration or freezing |
| Y02P 60/853 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> Drying |
| Y02P 60/855 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> Ice production, e.g. for conservation purposes |
| Y02P 60/87 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> Re-use of by-products of food processing for fodder production |
| Y02P 60/871 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> from molasses |
| Y02P 60/873 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> from distillers' or brewers' waste |
| Y02P 60/875 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> from waste products of dairy plants |
| Y02P 60/877 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> from by-products of vegetal origin |
| Y02P 60/89 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> characterised by the product |
| Y02P 60/891 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> Dairy products |
| Y02P 70/00 | Climate change mitigation technologies in the production process for final industrial or consumer products |
| Y02P 70/10 | <ul style="list-style-type: none"> Greenhouse gas [GHG] capture, material saving, heat recovery or other energy efficient measures, e.g. motor control, characterised by manufacturing processes |
| Y02P 70/12 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> related technologies for improving processes or machines for shaping products |
| Y02P 70/121 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> Machines for rolling metal, e.g. rolling mills |
| Y02P 70/123 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> Motor control |
| Y02P 70/125 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> Removing fumes from rolling mills |
| Y02P 70/127 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> using heat shields |
| Y02P 70/129 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> Heat recovery during rolling |
| Y02P 70/131 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> using liquid recovering devices |
| Y02P 70/133 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> for recovering coolants |
| Y02P 70/135 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> for recovering lubricants |
| Y02P 70/137 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> relating to forging, hammering, pressing or riveting |
| Y02P 70/139 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> relating to the manufacture or working of metal sheets or profiles |
| Y02P 70/141 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> relating to pressing processes or machines therefore |
| Y02P 70/143 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> Optimisation of energy consumption |
| Y02P 70/145 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> by control of drive motors |
| Y02P 70/16 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> related technologies for metal working by removing or adding material |
| Y02P 70/161 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> Power management, e.g. limiting power to tools |
| Y02P 70/163 | <ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> Power down for energy saving |

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| Y02P 70/167 | . . . relating to the design or operation of machining centres or machine tools |
| Y02P 70/169 | using minimal quantities of coolants or lubricants |
| Y02P 70/171 | Devices or processes for removing and reusing chips |
| Y02P 70/173 | Machine centres provided for turning, boring or milling |
| Y02P 70/175 | . . . relating to the design or operation of machines for dry cutting gears or toothed racks |
| Y02P 70/177 | . . . Grinding or polishing |
| Y02P 70/179 | Treatment of used abrasive materials aiming at a further reuse |
| Y02P 70/181 | . . . relating to the design or operation of machines for soldering, welding or cutting by applying heat locally |
| Y02P 70/183 | . . . relating to the design or operation of machines for machines for sawing, cutting, perforating, punching or severing |
| Y02P 70/185 | . . . relating to the operation of machines combining different processes for working of metal |
| Y02P 70/187 | . . . relating to the design or operation of machines for working metal not otherwise provided for |
| Y02P 70/20 | . . related technologies for printing, lining or stamping machines |
| Y02P 70/22 | . . Technologies for working on wood, veneer or plywood |
| Y02P 70/24 | . . related technologies for saving energy and raw materials during the production of paper or paper articles |
| Y02P 70/26 | . . related technologies for working on or processing of plastics |
| Y02P 70/261 | . . . recovering energy or power from drive motors in injection moulding |
| Y02P 70/263 | . . . recovering energy or reusing materials in extrusion moulding |
| Y02P 70/265 | . . . relating to blow moulding |
| Y02P 70/267 | Means for recycling or reusing auxiliaries or materials |
| Y02P 70/269 | reducing blowing fluid consumption |
| Y02P 70/271 | by recycling blow fluid |
| Y02P 70/273 | recycling reactive gas |
| Y02P 70/275 | reusing heat |
| Y02P 70/277 | . . . relating to thermoforming |
| Y02P 70/279 | Recycling or reuse of materials |
| Y02P 70/281 | Reuse of pressure or vacuum |
| Y02P 70/30 | . . related to technologies for conveying, packing or storing of goods or handling thin or filamentary material |
| Y02P 70/32 | . . relating to mixing |
| Y02P 70/34 | . . relating to separation, flotation or differential sedimentation |
| Y02P 70/36 | . . Recycling or reuse of a liquid sprayed or atomised |
| Y02P 70/38 | . . Apparatus or processes for applying liquids or other fluent materials |
| Y02P 70/40 | . . Drying by removing liquid |
| Y02P 70/405 | . . . Drying with heating arrangements using waste heat |
| Y02P 70/50 | . Manufacturing or production processes characterised by the final manufactured product |

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| Y02P 70/52 | . . Manufacturing of products or systems for producing renewable energy |
| Y02P 70/521 | . . . Photovoltaic generators |
| Y02P 70/523 | . . . Wind turbines |
| Y02P 70/525 | . . . Hydropower turbines |
| Y02P 70/527 | for tidal streams or dam-less hydropower, e.g. sea flood and ebb or stream current |
| Y02P 70/54 | . . Manufacturing of lithium-ion, lead-acid or alkaline secondary batteries |
| Y02P 70/56 | . . Manufacturing of fuel cells |
| 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 |
| Y02P 70/585 | . . . Aircraft Eco design, i.e. taking into account the full life cycle of the aircraft including re-use, recyclability and disposal |
| 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 |
| Y02P 70/601 | . . . the product being a basic electric component or element, i.e. cables, resistors, capacitors, switches, connectors, relays or protections |
| Y02P 70/603 | . . . the product being a lighting component |
| Y02P 70/605 | . . . the product being a semiconductor or solid state device or parts thereof |
| Y02P 70/607 | Manufacturing of electronic silicon based components |
| Y02P 70/609 | . . . the product being a dynamo-electric machine, i.e. electrical generators or motors |
| Y02P 70/611 | . . . the product being a printed circuit board [PCB] |
| Y02P 70/613 | . . . involving the assembly of several electronic elements |
| Y02P 70/62 | . . related technologies for production or treatment of textile or flexible materials or products thereof, including footwear |
| Y02P 70/621 | . . . Production or treatment of artificial filaments or the like |
| Y02P 70/623 | Energy efficient measures, e.g. motor control or heat recovery |
| Y02P 70/625 | Recovery of starting material, waste material or solvents during the manufacturing process |
| Y02P 70/627 | of cellulose, cellulose derivatives or proteins |
| Y02P 70/629 | of synthetic polymers |
| Y02P 70/631 | . . . Production or treatment of lace, e.g. knitting or braiding |
| Y02P 70/633 | Saving materials |
| Y02P 70/635 | Saving energy by reducing inertia of moving parts |
| Y02P 70/637 | . . . Treatment of textiles |
| Y02P 70/639 | Energy efficient measures, e.g. motor control or heat recovery |
| Y02P 70/641 | Recovery of solvents |
| Y02P 70/643 | Treatment of textiles using a short bath ratio |
| Y02P 70/645 | . . . Manufacturing of wall or floor covering materials or the like |
| Y02P 70/647 | Energy efficient measures, e.g. motor control or heat recovery |
| Y02P 70/649 | using scraps or recycled materials |

- Y02P 70/651 the materials being particles
- Y02P 70/653 . . . Footwear made at least partially of recyclable material
- 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

Y02P 80/00**Climate change mitigation technologies for sector-wide applications**

- Y02P 80/10 . Efficient use of energy
- Y02P 80/11 . . of electric energy
- Y02P 80/112 . . . Power supplies with power electronics for efficient use of energy, e.g. power factor correction [PFC] or resonant converters
- Y02P 80/114 . . . Control systems or methods for efficient use of energy
- Y02P 80/116 Electronic drive motor controls
- Y02P 80/12 . . using compressed air as energy carrier, e.g. for pneumatic systems
- Y02P 80/13 . . using pressurized fluid as energy carrier, e.g. for hydraulic systems
- Y02P 80/14 . . District level solutions, i.e. local energy networks
- Y02P 80/15 . . On-site combined power, heat or cool generation or distribution, e.g. combined heat and power [CHP] supply
- Y02P 80/152 . . . for heat recovery
- Y02P 80/154 . . . for steam generation or distribution
- Y02P 80/156 . . in fluid distribution systems
- Y02P 80/158 . . . Solar or wind-powered water pumping not specially adapted for irrigation
- Y02P 80/20 . Sector-wide applications using renewable energy
- Y02P 80/21 . . Biomass as fuel
- Y02P 80/22 . . Wind energy
- Y02P 80/23 . . Solar energy
- Y02P 80/24 . . . Solar thermal energy
- Y02P 80/25 . . . Photovoltaic energy
- Y02P 80/30 . Reducing waste in manufacturing processes; Calculations of released waste quantities
- Y02P 80/40 . Minimising material used in manufacturing processes

Y02P 90/00**Enabling technologies with a potential contribution to greenhouse gas [GHG] emissions mitigation**

- Y02P 90/02 . Total factory control, e.g. smart factories, flexible manufacturing systems [FMS] or integrated manufacturing systems [IMS]
- Y02P 90/04 . . characterised by the assembly processes
- Y02P 90/06 . . characterised by direct numerical control [DNC]
- Y02P 90/08 . . characterised by the cooperation between machine tools, manipulators or work piece supply systems
- Y02P 90/083 . . . Manipulators cooperating with conveyers
- Y02P 90/087 . . . Manipulators cooperating with machine tools
- Y02P 90/10 . . characterised by identification, e.g. of work pieces or equipment

- Y02P 90/12 . . characterised by programme execution
- Y02P 90/14 . . characterised by fault tolerance, reliability of production system
- Y02P 90/16 . . characterised by system universality, i.e. configurability or modularity of production units
- Y02P 90/18 . . characterised by the network communication
- Y02P 90/185 . . . using local area networks [LAN]
- Y02P 90/20 . . characterised by job scheduling, process planning or material flow
- Y02P 90/205 . . . Tool management
- Y02P 90/22 . . characterised by quality surveillance of production
- Y02P 90/24 . . characterised by computer integrated manufacturing [CIM], planning or realisation
- Y02P 90/26 . . characterised by modelling or simulation of the manufacturing system
- Y02P 90/265 . . . Product design therefor
- Y02P 90/28 . . characterised by transport systems
- Y02P 90/285 . . . using automatic guided vehicles [AGV]
- Y02P 90/30 . Computing systems specially adapted for manufacturing
- Y02P 90/40 . Fuel cell technologies in production processes
- Y02P 90/45 . Hydrogen technologies in production processes
- Y02P 90/50 . Energy storage in industry with an added climate change mitigation effect
- Y02P 90/60 . Electric or hybrid propulsion means for production processes
- Y02P 90/70 . Combining sequestration of CO₂ and exploitation of hydrocarbons by injecting CO₂ or carbonated water in oil wells
- Y02P 90/80 . Management or planning
- Y02P 90/82 . . Energy audits or management systems therefor
- Y02P 90/84 . . Greenhouse gas [GHG] management systems
- Y02P 90/845 . . . Inventory and reporting systems for greenhouse gases [GHG]
- Y02P 90/86 . . Maintenance planning
- Y02P 90/90 . Financial instruments for climate change mitigation, e.g. environmental taxes, subsidies or financing
- Y02P 90/95 . . CO₂ emission certificates or credits trading