

# CPC COOPERATIVE PATENT CLASSIFICATION

## C CHEMISTRY; METALLURGY

(NOTES omitted)

### METALLURGY

#### C23 COATING METALLIC MATERIAL; COATING MATERIAL WITH METALLIC MATERIAL; CHEMICAL SURFACE TREATMENT; DIFFUSION TREATMENT OF METALLIC MATERIAL; COATING BY VACUUM EVAPORATION, BY SPUTTERING, BY ION IMPLANTATION OR BY CHEMICAL VAPOUR DEPOSITION, IN GENERAL; INHIBITING CORROSION OF METALLIC MATERIAL OR INCRUSTATION IN GENERAL

(NOTES omitted)

#### C23G CLEANING OR DE-GREASING OF METALLIC MATERIAL BY CHEMICAL METHODS OTHER THAN ELECTROLYSIS

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|-------|--|-------------|--|
| 1/00  | <b>Cleaning or pickling metallic material with solutions or molten salts (with organic solvents <a href="#">C23G 5/02</a>)</b> | 1/22        | . . Light metals   |
| 1/02  | . with acid solutions  | 1/24        | . with neutral solutions   |
| 1/025 | . . {acidic pickling pastes}   | 1/26        | . . using inhibitors   |
| 1/04  | . . using inhibitors   | 1/28        | . with molten salts  |
| 1/06  | . . . organic inhibitors   | 1/30        | . . using inhibitors   |
|       | <b>NOTE</b>  | 1/32        | . . Heavy metals   |
|       | In groups <a href="#">C23G 1/061</a> - <a href="#">C23G 1/068</a> an invention is classified in the last appropriate place     | 1/34        | . . Light metals   |
| 1/061 | . . . . {nitrogen-containing compounds}  | 1/36        | . Regeneration of waste pickling liquors   |
| 1/063 | . . . . {heterocyclic compounds}   | <b>3/00</b> | <b>Apparatus for cleaning or pickling metallic material (with organic solvents <a href="#">C23G 5/04</a>)</b>                                    |
| 1/065 | . . . . {sulfur-containing compounds}  | 3/02        | . for cleaning wires, strips, filaments continuously   |
| 1/066 | . . . . {phosphorus-containing compounds}  | 3/021       | . . {by dipping}   |
| 1/068 | . . . . {compounds containing a C=C bond}  | 3/022       | . . . {the objects following a helicoidal path}  |
| 1/08  | . . Iron or steel  | 3/023       | . . {by spraying}  |
|       | <b>NOTE</b>  | 3/024       | . . {by a combination of dipping and spraying}   |
|       | In groups <a href="#">C23G 1/081</a> - <a href="#">C23G 1/088</a> an invention is classified in the last appropriate place     | 3/025       | . . {Details of the apparatus, e.g. linings or sealing means}  |
| 1/081 | . . . {solutions containing H <sub>2</sub> SO <sub>4</sub> }   | 3/026       | . . . {for guiding the objects}  |
| 1/083 | . . . {solutions containing H <sub>3</sub> PO <sub>4</sub> }   | 3/027       | . . {Associated apparatus, e.g. for pretreating or after-treating}   |
| 1/085 | . . . {solutions containing HNO <sub>3</sub> }   | 3/028       | . . . {for thermal or mechanical pretreatment}   |
| 1/086 | . . . {solutions containing HF}  | 3/029       | . . . {for removing the pickling fluid from the objects}   |
| 1/088 | . . . {solutions containing organic acids}   | 3/04        | . for cleaning pipes   |
| 1/10  | . . Other heavy metals   | <b>5/00</b> | <b>Cleaning or de-greasing metallic material by other methods; Apparatus for cleaning or de-greasing metallic material with organic solvents</b> |
| 1/103 | . . . {copper or alloys of copper}   |             | <b>NOTE</b>  |
| 1/106 | . . . {refractory metals}  |             | Mixtures of organic solvents are classified according to the major component   |
| 1/12  | . . Light metals   | 5/02        | . using organic solvents   |
| 1/125 | . . . {aluminium}  | 5/024       | . . containing hydrocarbons  |
| 1/14  | . with alkaline solutions  | 5/028       | . . containing halogenated hydrocarbons  |
| 1/16  | . . using inhibitors   | 5/02803     | . . . {containing fluorine}  |
| 1/18  | . . . Organic inhibitors   | 5/02806     | . . . {containing only chlorine as halogen atom}   |
| 1/19  | . . Iron or steel  | 5/02809     | . . . {containing chlorine and fluorine}   |
| 1/20  | . . Other heavy metals   | 5/02812     | . . . . {Perhalogenated hydrocarbons}  |
| 1/205 | . . . {refractory metals}  |             |  |

- 5/02816 . . . . . {Ethanes}
- 5/02819 . . . . . {C<sub>2</sub>Cl<sub>3</sub>F<sub>3</sub>}
- 5/02822 . . . . . {C<sub>2</sub>Cl<sub>4</sub>F<sub>2</sub>}
- 5/02825 . . . . . {containing hydrogen}
- 5/02829 . . . . . {Ethanes}
- 5/02832 . . . . . {C<sub>2</sub>H<sub>3</sub>Cl<sub>2</sub>F}
- 5/02835 . . . . . {C<sub>2</sub>H<sub>2</sub>Cl<sub>2</sub>F<sub>2</sub>}
- 5/02838 . . . . . {C<sub>2</sub>HCl<sub>2</sub>F<sub>3</sub>}
- 5/02841 . . . . . {Propanes}
- 5/02845 . . . . . {C<sub>3</sub>H<sub>3</sub>ClF<sub>4</sub>}
- 5/02848 . . . . . {C<sub>2</sub>H<sub>2</sub>Cl<sub>2</sub>F<sub>4</sub>}
- 5/02851 . . . . . {C<sub>2</sub>HCl<sub>2</sub>F<sub>5</sub>}
- 5/02854 . . . . . {characterised by the stabilising or corrosion  
inhibiting additives}
- 5/02858 . . . . . {Hydrocarbons}
- 5/02861 . . . . . {Oxygen-containing compounds}
- 5/02864 . . . . . {Alcohols}
- 5/02867 . . . . . {aliphatic}
- 5/0287 . . . . . {aromatic}
- 5/02874 . . . . . {Aldehydes or ketones}
- 5/02877 . . . . . {Ethers}
- 5/0288 . . . . . {Epoxy compounds}
- 5/02883 . . . . . {Nitrogen-containing compounds}
- 5/02887 . . . . . {Nitro-compounds}
- 5/0289 . . . . . {N-heterocyclics}
- 5/02893 . . . . . {Sulfur-containing compounds}
- 5/02896 . . . . . {Phosphorus-containing compounds}
- 5/032 . . . . . containing oxygen-containing compounds
- 5/036 . . . . . having also nitrogen
- 5/04 . . . . . Apparatus
- 5/06 . . . . . using emulsions