

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

1/00 **Cleaning or pickling metallic material with solutions or molten salts** (with organic solvents [C23G 5/02](#))

- 1/02 . with acid solutions
- 1/025 . . {acidic pickling pastes}
- 1/04 . . using inhibitors
- 1/06 . . . organic inhibitors

NOTE

In groups [C23G 1/061](#) - [C23G 1/068](#) an invention is classified in the last appropriate place

- 1/061 {nitrogen-containing compounds}
- 1/063 {heterocyclic compounds}
- 1/065 {sulfur-containing compounds}
- 1/066 {phosphorus-containing compounds}
- 1/068 {compounds containing a C=C bond}
- 1/08 . . Iron or steel

NOTE

In groups [C23G 1/081](#) - [C23G 1/088](#) an invention is classified in the last appropriate place

- 1/081 . . . {solutions containing H₂SO₄}
- 1/083 . . . {solutions containing H₃PO₄}
- 1/085 . . . {solutions containing HNO₃}
- 1/086 . . . {solutions containing HF}
- 1/088 . . . {solutions containing organic acids}
- 1/10 . . Other heavy metals
- 1/103 . . . {copper or alloys of copper}
- 1/106 . . . {refractory metals}
- 1/12 . . Light metals
- 1/125 . . . {aluminium}
- 1/14 . with alkaline solutions
- 1/16 . . using inhibitors
- 1/18 . . . Organic inhibitors
- 1/19 . . Iron or steel
- 1/20 . . Other heavy metals
- 1/205 . . . {refractory metals}

- 1/22 . . Light metals
- 1/24 . with neutral solutions
- 1/26 . . using inhibitors
- 1/28 . with molten salts
- 1/30 . . using inhibitors
- 1/32 . . Heavy metals
- 1/34 . . Light metals
- 1/36 . Regeneration of waste pickling liquors

3/00 **Apparatus for cleaning or pickling metallic material** (with organic solvents [C23G 5/04](#))

- 3/02 . for cleaning wires, strips, filaments continuously
- 3/021 . . {by dipping}
- 3/022 . . . {the objects following a helicoidal path}
- 3/023 . . {by spraying}
- 3/024 . . {by a combination of dipping and spraying}
- 3/025 . . {Details of the apparatus, e.g. linings or sealing means}
- 3/026 . . . {for guiding the objects}
- 3/027 . . {Associated apparatus, e.g. for pretreating or after-treating}
- 3/028 . . . {for thermal or mechanical pretreatment}
- 3/029 . . . {for removing the pickling fluid from the objects}
- 3/04 . for cleaning pipes

5/00 **Cleaning or de-greasing metallic material by other methods; Apparatus for cleaning or de-greasing metallic material with organic solvents**

NOTE

Mixtures of organic solvents are classified according to the major component

- 5/02 . using organic solvents
- 5/024 . . containing hydrocarbons
- 5/028 . . containing halogenated hydrocarbons
- 5/02803 . . . {containing fluorine}
- 5/02806 . . . {containing only chlorine as halogen atom}
- 5/02809 . . . {containing chlorine and fluorine}
- 5/02812 {Perhalogenated hydrocarbons}

5/02816 {Ethanes}
 5/02819 {C₂Cl₃F₃}
 5/02822 {C₂Cl₄F₂}
 5/02825 {containing hydrogen}
 5/02829 {Ethanes}
 5/02832 {C₂H₃Cl₂F}
 5/02835 {C₂H₂Cl₂F₂}
 5/02838 {C₂HCl₂F₃}
 5/02841 {Propanes}
 5/02845 {C₃H₃ClF₄}
 5/02848 {C₂H₂Cl₂F₄}
 5/02851 {C₂HCl₂F₅}
 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