

# CPC COOPERATIVE PATENT CLASSIFICATION

## C CHEMISTRY; METALLURGY

(NOTES omitted)

### METALLURGY

**C23 COATING METALLIC MATERIAL; COATING MATERIAL WITH METALLIC MATERIAL** (by metallising textiles [D06M 11/83](#); decorating textiles by locally metallising [D06Q 1/04](#)); **CHEMICAL SURFACE TREATMENT; DIFFUSION TREATMENT OF METALLIC MATERIAL; COATING BY VACUUM EVAPORATION, BY SPUTTERING, BY ION IMPLANTATION OR BY CHEMICAL VAPOUR DEPOSITION, IN GENERAL** (for specific applications, see the relevant places, e.g. for manufacturing resistors [H01C 17/06](#)); **INHIBITING CORROSION OF METALLIC MATERIAL OR INCRUSTATION IN GENERAL** (treating metal surfaces or coating of metals by electrolysis or electrophoresis [C25D](#), [C25F](#))

(NOTES omitted)

**C23G CLEANING OR DEGREASING OF METALLIC MATERIAL BY CHEMICAL METHODS OTHER THAN ELECTROLYSIS** (polishing compositions [C09G](#); detergents in general [C11D](#))

#### 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>Cleaning or pickling metallic material with solutions or molten salts</b> (with organic solvents <a href="#">C23G 5/02</a> )	1/106	. . . {refractory metals}
1/02	. with acid solutions	1/12	. . Light metals
1/025	. . {acidic pickling pastes}	1/125	. . . {aluminium}
1/04	. . using inhibitors	1/14	. with alkaline solutions
1/06	. . . organic inhibitors	1/16	. . using inhibitors
	<b>NOTE</b>	1/18	. . . Organic inhibitors
	In groups <a href="#">C23G 1/061</a> - <a href="#">C23G 1/068</a> an invention is classified in the last appropriate place	1/19	. . Iron or steel
1/061	. . . . {nitrogen-containing compounds}	1/20	. . Other heavy metals
1/063	. . . . {heterocyclic compounds}	1/205	. . . {refractory metals}
1/065	. . . . {sulfur-containing compounds}	1/22	. . Light metals
1/066	. . . . {phosphorus-containing compounds}	1/24	. with neutral solutions
1/068	. . . . {compounds containing a C=C bond}	1/26	. . using inhibitors
1/08	. . Iron or steel	1/28	. with molten salts
	<b>NOTE</b>	1/30	. . using inhibitors
	In groups <a href="#">C23G 1/081</a> - <a href="#">C23G 1/088</a> an invention is classified in the last appropriate place	1/32	. . Heavy metals
1/081	. . . {solutions containing H <sub>2</sub> SO <sub>4</sub> }	1/34	. . Light metals
1/083	. . . {solutions containing H <sub>3</sub> PO <sub>4</sub> }	1/36	. Regeneration of waste pickling liquors
1/085	. . . {solutions containing HNO <sub>3</sub> }	<b>3/00</b>	<b>Apparatus for cleaning or pickling metallic material</b> (with organic solvents <a href="#">C23G 5/04</a> {; apparatus for continuously conveying articles into baths <a href="#">B65G</a> })
1/086	. . . {solutions containing HF}	3/02	. for cleaning wires, strips, filaments continuously
1/088	. . . {solutions containing organic acids}	3/021	. . {by dipping}
1/10	. . Other heavy metals	3/022	. . . {the objects following a helicoidal path}
1/103	. . . {copper or alloys of copper}	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 . . . . . {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