

**CPC****COOPERATIVE PATENT CLASSIFICATION****C23G****CLEANING OR DEGREASING OF METALLIC MATERIAL BY CHEMICAL METHODS OTHER THAN ELECTROLYSIS** (polishingcompositions [C09G](#); detergents in general [C11D](#))**C23G 1/00****Cleaning or pickling metallic material with solutions or molten salts** (with organic solvents [C23G 5/02](#))**C23G 1/02**

. with acid solutions

**C23G 1/025**

.. {acidic pickling pastes}

**C23G 1/04**

.. using inhibitors

**C23G 1/06**

... organic inhibitors

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

.... {nitrogen-containing compounds}

**C23G 1/063**

.... {heterocyclic compounds}

**C23G 1/065**

.... {sulfur-containing compounds}

**C23G 1/066**

.... {phosphorus-containing compounds}

**C23G 1/068**

.... {compounds containing a C=C bond}

**C23G 1/08**

.. Iron or steel

**NOTE**In groups [C23G 1/081](#) to [C23G 1/088](#) an invention is classified in the last appropriate place**C23G 1/081**... {solutions containing H<sub>2</sub>SO<sub>4</sub>}**C23G 1/083**... {solutions containing H<sub>3</sub>PO<sub>4</sub>}**C23G 1/085**... {solutions containing HNO<sub>3</sub>}**C23G 1/086**

... {solutions containing HF}

**C23G 1/088**

... {solutions containing organic acids}

**C23G 1/10**

.. Other heavy metals

**C23G 1/103**

... {copper or alloys of copper}

**C23G 1/106**

... {refractory metals}

**C23G 1/12**

.. Light metals

**C23G 1/125**

... {aluminium}

**C23G 1/14**

. with alkaline solutions

**C23G 1/16**

.. using inhibitors

- C23G 1/18 . . . Organic inhibitors
- C23G 1/19 . . Iron or steel
- C23G 1/20 . . Other heavy metals
- C23G 1/205 . . . {refractory metals}
- C23G 1/22 . . Light metals
- C23G 1/24 . with neutral solutions
- C23G 1/26 . . using inhibitors
- C23G 1/28 . with molten salts
- C23G 1/30 . . using inhibitors
- C23G 1/32 . . Heavy metals
- C23G 1/34 . . Light metals
- C23G 1/36 . Regeneration of waste pickling liquors

**C23G 3/00** **Apparatus for cleaning or pickling metallic material** (with organic solvents [C23G 5/04](#); {apparatus for continuously conveying articles into baths [B65G](#)})

- C23G 3/02 . for cleaning wires, strips, filaments continuously
- C23G 3/021 . . {by dipping}
- C23G 3/022 . . . {the objects following a helicoidal path}
- C23G 3/023 . . {by spraying}
- C23G 3/024 . . {by a combination of dipping and spraying}
- C23G 3/025 . . {Details of the apparatus, e.g. linings or sealing means}
- C23G 3/026 . . . {for guiding the objects}
- C23G 3/027 . . {Associated apparatus, e.g. for pretreating or after-treating}
- C23G 3/028 . . . {for thermal or mechanical pretreatment}
- C23G 3/029 . . . {for removing the pickling fluid from the objects}
- C23G 3/04 . for cleaning pipes

**C23G 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

- C23G 5/02 . using organic solvents
- C23G 5/024 . . containing hydrocarbons
- C23G 5/028 . . containing halogenated hydrocarbons
- C23G 5/02803 . . . {containing fluorine}

C23G 5/02806	...	{containing only chlorine as halogen atom}
C23G 5/02809	...	{containing chlorine and fluorine}
C23G 5/02812	....	{Perhalogenated hydrocarbons}
C23G 5/02816	.....	{Ethaness}
C23G 5/02819	.....	{C2Cl3F3}
C23G 5/02822	.....	{C2Cl4F2}
C23G 5/02825	....	{containing hydrogen}
C23G 5/02829	.....	{Ethaness}
C23G 5/02832	.....	{C2H3Cl2F}
C23G 5/02835	.....	{C2H2Cl2F2}
C23G 5/02838	.....	{C2HCl2F3}
C23G 5/02841	.....	{Propaness}
C23G 5/02845	.....	{C3H3ClF4}
C23G 5/02848	.....	{C2H2Cl2F4}
C23G 5/02851	.....	{C2HCl2F5}
C23G 5/02854	...	{characterised by the stabilising or corrosion inhibiting additives}
C23G 5/02858	....	{Hydrocarbons}
C23G 5/02861	....	{Oxygen-containing compounds}
C23G 5/02864	.....	{Alcohols}
C23G 5/02867	.....	{aliphatic}
C23G 5/0287	.....	{aromatic}
C23G 5/02874	.....	{Aldehydes or ketones}
C23G 5/02877	.....	{Ethers}
C23G 5/0288	.....	{Epoxy compounds}
C23G 5/02883	....	{Nitrogen-containing compounds}
C23G 5/02887	.....	{Nitro-compounds}
C23G 5/0289	.....	{N-heterocyclics}
C23G 5/02893	....	{Sulfur-containing compounds}
C23G 5/02896	....	{Phosphorus-containing compounds}
C23G 5/032	..	containing oxygen-containing compound
C23G 5/036	...	having also nitrogen
C23G 5/04	..	Apparatus
C23G 5/06	.	using emulsions