

CPC**COOPERATIVE PATENT CLASSIFICATION****C23G**

CLEANING OR DEGREASING OF METALLIC MATERIAL BY CHEMICAL METHODS OTHER THAN ELECTROLYSIS ([polishing compositions](#) [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 H₂SO₄](#) }

[C23G 1/083](#)

... { [solutions containing H₃PO₄](#) }

[C23G 1/085](#)

... { [solutions containing HNO₃](#) }

[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 { Ethanes }

C23G 5/02819	{ C2Cl3F3 }
C23G 5/02822	{ C2Cl4F2 }
C23G 5/02825	{ containing hydrogen }
C23G 5/02829	{ Ethanes }
C23G 5/02832	{ C2H3Cl2F }
C23G 5/02835	{ C2H2Cl2F2 }
C23G 5/02838	{ C2HCl2F3 }
C23G 5/02841	{ Propanes }
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