

## SECTION B — PERFORMING OPERATIONS; TRANSPORTING

### B03 SEPARATION OF SOLID MATERIALS USING LIQUIDS OR USING PNEUMATIC TABLES OR JIGS; MAGNETIC OR ELECTROSTATIC SEPARATION OF SOLID MATERIALS FROM SOLID MATERIALS OR FLUIDS; SEPARATION BY HIGH-VOLTAGE ELECTRIC FIELDS

#### B03C MAGNETIC OR ELECTROSTATIC SEPARATION OF SOLID MATERIALS FROM SOLID MATERIALS OR FLUIDS; SEPARATION BY HIGH-VOLTAGE ELECTRIC FIELDS (filters making use of electricity or magnetism B01D 35/06; separating isotopes B01D 59/00; combinations of magnetic or electrostatic separation with separation of solids by other means B03B, B07B; separating sheets from piles B65H 3/00; magnets or magnet coils per se H01F) [5]

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| <p><b>1/00 Magnetic separation [1, 2006.01]</b></p> <p>1/005 • Pretreatment specially adapted for magnetic separation [6, 2006.01]</p> <p>1/01 • • by addition of magnetic adjuvants [6, 2006.01]</p> <p>1/015 • • by chemical treatment imparting magnetic properties to the material to be separated, e.g. roasting, reduction, oxidation [6, 2006.01]</p> <p>1/02 • acting directly on the substance being separated [1, 5, 2006.01]</p> <p>1/021 • • Separation using Meissner effect, i.e. deflection of superconductive particles in a magnetic field [6, 2006.01]</p> <p>1/023 • • Separation using Lorentz force, i.e. deflection of electrically charged particles in a magnetic field [6, 2006.01]</p> <p>1/025 • • High gradient magnetic separators [5, 2006.01]</p> <p>1/027 • • • with reciprocating canisters [6, 2006.01]</p> <p>1/029 • • • with circulating matrix or matrix elements (matrix elements B03C 1/034) [6, 2006.01]</p> <p>1/03 • • • rotating, e.g. of the carousel type [5, 6, 2006.01]</p> <p>1/031 • • • Component parts; Auxiliary operations [6, 2006.01]</p> <p>1/032 • • • • Matrix cleaning systems [6, 2006.01]</p> <p>1/033 • • • • characterised by the magnetic circuit [6, 2006.01]</p> <p>1/034 • • • • • characterised by the matrix elements [6, 2006.01]</p> <p>1/035 • • Open gradient magnetic separators, i.e. separators in which the gap is unobstructed, characterised by the configuration of the gap [5, 2006.01]</p> <p>1/0355 • • • using superconductive coils [6, 2006.01]</p> <p>1/04 • • with the material carriers in the form of trays or with tables [1, 2006.01]</p> <p>1/06 • • • with magnets moving during operation [1, 2006.01]</p> <p>1/08 • • • with non-movable magnets [1, 2006.01]</p> <p>1/10 • • with cylindrical material carriers (B03C 1/247 takes precedence) [1, 6, 2006.01]</p> <p>1/12 • • • with magnets moving during operation; with movable pole pieces [1, 2006.01]</p> <p>1/14 • • • with non-movable magnets [1, 2006.01]</p> <p>1/16 • • with material carriers in the form of belts [1, 2006.01]</p> <p>1/18 • • • with magnets moving during operation [1, 2006.01]</p> | <p>1/20 • • • • in the form of belts, e.g. cross-belt type [1, 2006.01]</p> <p>1/22 • • • with non-movable magnets [1, 2006.01]</p> <p>1/23 • • with material carried by oscillating fields; with material carried by travelling fields, e.g. generated by stationary magnetic coils; Eddy-current separators, e.g. sliding ramp [5, 2006.01]</p> <p>1/24 • • • with material carried by travelling fields [1, 5, 2006.01]</p> <p>1/247 • • • • obtained by a rotating magnetic drum [6, 2006.01]</p> <p>1/253 • • • • obtained by a linear motor [6, 2006.01]</p> <p>1/26 • • with free falling material (B03C 1/035 takes precedence) [1, 5, 2006.01]</p> <p>1/28 • • Magnetic plugs and dipsticks [1, 2006.01]</p> <p>1/30 • • Combinations with other devices, not otherwise provided for [1, 2006.01]</p> <p>1/32 • acting on the medium containing the substance being separated, e.g. magneto-gravimetric-, magnetohydrostatic-, or magnetohydrodynamic separation [5, 2006.01]</p> <p><b>3/00 Separating dispersed particles from gases or vapour, e.g. air, by electrostatic effect</b> (exhaust or silencing apparatus for machines or engines having means for removing solid constituents of exhaust, using electric or electrostatic separators F01N 3/01) [1, 2006.01]</p> <p>3/01 • Pretreatment of the gases prior to electrostatic precipitation [1, 2006.01]</p> <p>3/011 • • Prefiltering; Flow controlling [6, 2006.01]</p> <p>3/013 • • Conditioning by chemical additives, e.g. with SO<sub>3</sub> [6, 2006.01]</p> <p>3/014 • • Addition of water; Heat exchange, e.g. by condensation [6, 2006.01]</p> <p>3/016 • • by acoustic or electromagnetic energy, e.g. ultra-violet light [6, 2006.01]</p> <p>3/017 • Combinations of electrostatic separation with other processes, not otherwise provided for [6, 2006.01]</p> <p>3/019 • Post-treatment of gases [6, 2006.01]</p> <p>3/02 • Plant or installations having external electricity supply (electrode constructions B03C 3/40) [1, 2006.01]</p> <p>3/04 • • dry type [1, 2006.01]</p> <p>3/06 • • • characterised by presence of stationary tube electrodes [1, 2006.01]</p> <p>3/08 • • • characterised by presence of stationary flat electrodes arranged with their flat surfaces parallel to the gas stream [1, 2006.01]</p> |
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## B03C

- 3/09 • • • characterised by presence of stationary flat electrodes arranged with their flat surfaces at right angles to the gas stream [1, 2006.01]
- 3/10 • • • characterised by presence of electrodes moving during separating action [1, 2006.01]
- 3/12 • • • characterised by separation of ionising and collecting stations [1, 2006.01]
- 3/14 • • • characterised by the additional use of mechanical effects, e.g. gravity (B03C 3/32 takes precedence) [1, 2006.01]
- 3/145 • • • • Inertia [6, 2006.01]
- 3/15 • • • • Centrifugal forces [6, 2006.01]
- 3/155 • • • • Filtration [6, 2006.01]
- 3/16 • • wet type [1, 2006.01]
- 3/28 • Plant or installations without electricity supply, e.g. using electrets [1, 2006.01]
- 3/30 • • in which electrostatic charge is generated by passage of the gases, i.e. tribo-electricity [1, 2006.01]
- 3/32 • Transportable units, e.g. for cleaning room air (room air-conditioners having an electrostatic separating stage F24F) [1, 2006.01]
- 3/34 • Constructional details or accessories or operation thereof [1, 2006.01]
- 3/36 • • Controlling flow of gases or vapour [1, 2006.01]
- 3/38 • • Particle charging or ionising stations, e.g. using electric discharge, radioactive radiation, flames (electrode constructions B03C 3/40; ionising gases H05H) [1, 2006.01]
- 3/40 • • Electrode constructions [1, 2006.01]
- 3/41 • • • Ionising-electrodes [1, 2006.01]
- 3/43 • • • • radioactive [1, 2006.01]
- 3/45 • • • Collecting-electrodes [1, 2006.01]
- 3/47 • • • • flat, e.g. plates, discs, gratings [1, 2006.01]
- 3/49 • • • • tubular [1, 2006.01]
- 3/51 • • • • Catch-space electrodes, e.g. slotted-box form [1, 2006.01]
- 3/53 • • • • Liquid, or liquid-film, electrodes [1, 2006.01]
- 3/60 • • • Use of special materials other than liquids [1, 2006.01]
- 3/62 • • • • ceramics [1, 2006.01]
- 3/64 • • • • synthetic resins [1, 2006.01]
- 3/66 • • Applications of electricity supply techniques [1, 2006.01]
- 3/68 • • • Control systems therefor [1, 2006.01]
- 3/70 • • • insulating in electric separators (B03C 3/53 takes precedence) [1, 2006.01]
- 3/72 • • Emergency control systems [1, 2006.01]
- 3/74 • • Cleaning the electrodes [1, 2006.01]
- 3/76 • • • by using a mechanical vibrator, e.g. rapping gear [1, 2006.01]
- 3/78 • • • by washing [1, 2006.01]
- 3/80 • • • by gas or solid particle blasting [1, 2006.01]
- 3/82 • • Housings [1, 2006.01]
- 3/84 • • • Protective coatings [1, 2006.01]
- 3/86 • • Electrode-carrying means (B03C 3/40 takes precedence) [1, 2006.01]
- 3/88 • • Cleaning-out collected particles [1, 2006.01]
- 5/00 **Separating dispersed particles from liquids by electrostatic effect** (combined with centrifuges B04B 5/10) [1, 2, 2006.01]
- 5/02 • Separators [1, 2006.01]
- 7/00 **Separating solids from solids by electrostatic effect** [1, 2006.01]
- 7/02 • Separators [1, 2006.01]
- 7/04 • • with material carriers in the form of trays, troughs, or tables [1, 2006.01]
- 7/06 • • with cylindrical material carriers [1, 2006.01]
- 7/08 • • with material carriers in the form of belts [1, 2006.01]
- 7/10 • • with material falling in cascades [1, 2006.01]
- 7/12 • • with material falling free [1, 2006.01]
- 9/00 **Electrostatic separation not provided for in any single one of the other main groups of this subclass** [1, 2006.01]
- 11/00 **Separation by high-voltage electrical fields, not provided for in other groups of this subclass** [2006.01]