

**CPC****COOPERATIVE PATENT CLASSIFICATION****B03B****SEPARATING SOLID MATERIALS USING LIQUIDS OR USING PNEUMATIC TABLES OR JIGS**

( removing fluids from solids [B01D](#) ; magnetic or electrostatic separation of solid materials from solid materials or fluids, separation by high voltage electric fields [B03C](#) ; flotation differential sedimentation [B03D](#) ; separating by dry methods [B07](#) ; screening or sifting [B07B](#) ; by picking [B07C](#) ; separating peculiar to particular materials and provided for in other single classes, see the relevant classes )

**Guidance heading:****B03B 1/00**

**Conditioning for facilitating separation by altering physical properties of the matter to be treated** ( pre-treatment of ores in general [C22B](#) ) { Pretreatment prior to magnetic separation [B03C 1/00](#) }

**B03B 1/02**

- Preparatory heating

**B03B 1/04**

- by additives

**B03B 1/06**

- by varying ambient atmospheric pressure

**B03B 4/00**

**Separating by pneumatic tables or by pneumatic jigs** ( sink-float separation using dry heavy media [B03B 5/46](#) )

**NOTE**

Group [B03B 4/005](#) takes precedence over groups [B03B 4/02](#) to [B03B 4/065](#)

**B03B 4/005**

- { the currents being pulsating, e.g. pneumatic jigs; combination of continuous and pulsating currents }

**B03B 4/02**

- using swinging or shaking tables

**B03B 4/04**

- using rotary tables or tables formed by travelling belts ( separating solids from solids using gas currents and revolving drums [B07B 4/06](#) )

**B03B 4/06**

- using fixed and inclined tables; { using stationary pneumatic tables, e.g. fluidised beds }

**B03B 4/065**

- .. { having inclined portions }

**B03B 5/00**

**Washing granular, powdered or lumpy materials ; Wet separating** ( separating by pneumatic tables or by pneumatic jigs [B03B 4/00](#) )

**B03B 5/02**

- using shaken, pulsated or stirred beds as the principal means of separation ( [B03B 5/28](#) , [B03B 5/48](#) take precedence )

**B03B 5/04**

- .. on shaking tables ( on vanners [B03B 5/08](#) )

**B03B 5/06**

- ... Constructional details of shaking tables, e.g. riffing

- B03B 5/08 . . on vanners
- B03B 5/10 . . on jigs
- B03B 5/12 . . . using pulses generated mechanically in fluid
- B03B 5/14 . . . . Plunger jigs
- B03B 5/16 . . . . Diaphragm jigs
- B03B 5/18 . . . . Moving-sieve jigs
- B03B 5/20 . . . using pulses generated by air injection
- B03B 5/22 . . . using pulses generated by liquid injection
- B03B 5/24 . . . Constructional details of jigs, e.g. pulse control devices
- B03B 5/26 . . in sluices
  
- B03B 5/28 . by sink-float separation
- B03B 5/30 . . using heavy liquids or suspensions
- B03B 5/32 . . . using centrifugal force ( [centrifuges B04B](#) ; [cyclones B04C](#) )
- B03B 5/34 . . . . Applications of hydrocyclones
- B03B 5/36 . . . Devices therefor, other than using centrifugal force ( [jigs B03B 5/10](#) )
- B03B 5/38 . . . . of conical receptacle type
- B03B 5/40 . . . . of trough type
- B03B 5/42 . . . . of drum of lifting wheel type
- B03B 5/44 . . . Application of particular media therefor
- B03B 5/442 . . . . { composition of heavy media }
- B03B 5/445 . . . . . { composition of dry heavy media }
- B03B 5/447 . . . . { recovery of heavy media }
- B03B 5/46 . . using dry heavy media ; Devices therefor
  
- B03B 5/48 . by mechanical classifiers ( [sink-float separation aspects B03B 5/28](#) )
- B03B 5/50 . . Rake classifiers
- B03B 5/52 . . Spiral classifiers
- B03B 5/54 . . Drag classifiers
- B03B 5/56 . . Drum classifiers
- B03B 5/58 . . Bowl classifiers
  
- B03B 5/60 . by non-mechanical classifiers, e.g. slime tanks ( [using shaken, pulsated or stirred beds as the principal means of separation B03B 5/02](#) ; [hydraulic classifiers B03B 5/62](#) ; [water impulse classifiers B03B 5/68](#) )
  
- B03B 5/62 . by hydraulic classifiers, e.g. of launder, tank, spiral or helical chute concentrator type
- B03B 5/623 . . { Upward current classifiers }
- B03B 5/626 . . { Helical separators }
- B03B 5/64 . . of the free settling type
- B03B 5/66 . . of the hindered settling type
  
- B03B 5/68 . by water impulse ( [shaking tables B03B 5/04](#) ; [jigs B03B 5/10](#) ; [hydraulic classifiers B03B 5/62](#) )
- B03B 5/70 . . on tables or strakes

- B03B 5/72 . . . which are movable
- B03B 5/74 . . . . Revolving tables
- B03B 7/00** **Combinations of wet processes or apparatus with other processes or apparatus, e.g. for dressing ores or garbage**
- B03B 9/00** **General arrangement of separating plant, e.g. flow sheets**
- B03B 9/005 . { specially adapted for coal }
- B03B 9/02 . specially adapted for oil-sand, oil-chalk, oil-shales, ozokerite, bitumen, or the like
- B03B 9/04 . specially adapted for furnace residues, smeltings, or foundry slags
- B03B 9/06 . specially adapted for refuse
- B03B 9/061 . . { the refuse being industrial }
- B03B 9/062 . . . { the refuse being glass }
- B03B 9/063 . . . { the refuse being concrete slurry }
- B03B 9/065 . . . { the refuse being building rubble }
- B03B 11/00** **Feed or discharge devices integral with washing or wet-separating equipment ( filling or emptying devices per se [B65G 65/30](#) )**
- B03B 13/00** **Control arrangements specially adapted for wet-separating apparatus or for dressing plant, using physical effects ( detecting, measuring, or analysing devices [G01](#) ; control devices in general [G05](#) )**
- B03B 13/005 . { Methods or arrangements for controlling the physical properties of heavy media ( in relation with groups [B03B 5/30](#) to [B03B 5/46](#) ) , e.g. density, concentration, viscosity }
- B03B 13/02 . using optical effects
- B03B 13/04 . using electrical or electromagnetic effects
- B03B 13/06 . using absorption or reflection of radioactive emanation
- Guidance heading:**
- B03B 2005/00** **Washing granular, powdered or lumpy materials ; Wet separating ( separating by pneumatic tables or by pneumatic jigs [B03B 4/00](#) )**
- B03B 2005/28 . by sink-float separation
- B03B 2005/30 . . using heavy liquids or suspensions
- B03B 2005/36 . . . Devices therefor, other than using centrifugal force ( jigs [B03B 5/10](#) )
- B03B 2005/40 . . . . of trough type
- B03B 2005/405 . . . . . using horizontal currents

**B03B 2009/00**      **General arrangement of separating plant, e.g. flow sheets**

- B03B 2009/06      .    specially adapted for refuse
- [B03B 2009/066](#)      . .    the refuse being batteries
- [B03B 2009/067](#)      . .    the refuse being carpets
- [B03B 2009/068](#)      . .    Specific treatment of shredder light fraction

**B03B 2011/00**      **Feed or discharge devices integral with washing or wet-separating equipment ( [filling or emptying devices per se B65G 65/30](#) )**

- [B03B 2011/002](#)      .    Rotary feeding devices
- [B03B 2011/004](#)      .    Lifting wheel dischargers
- [B03B 2011/006](#)      .    Scraper dischargers
- [B03B 2011/008](#)      .    Screw dischargers