

**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. riffling

- 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 2005/405 ..... using horizontal currents
- B03B 5/42 .... of drum or 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 2009/066 . . the refuse being batteries
- B03B 2009/067 . . the refuse being carpets
- B03B 2009/068 . . Specific treatment of shredder light fraction
  
- B03B 11/00** **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
  
- 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