

# CPC COOPERATIVE PATENT CLASSIFICATION

## B PERFORMING OPERATIONS; TRANSPORTING

(NOTES omitted)

### SEPARATING; MIXING

**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** (separating isotopes [B01D 59/00](#); crushing or disintegrating [B02C](#); centrifuges or vortex apparatus for carrying out physical processes [B04](#))

**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](#))

<b>1/00</b>	<b>Conditioning for facilitating separation by altering physical properties of the matter to be treated</b> (pretreatment of ores in general <a href="#">C22B</a> {; pretreatment prior to magnetic separation <a href="#">B03C 1/00</a> })	5/16	. . . . Diaphragm jigs
		5/18	. . . . Moving-sieve jigs
		5/20	. . . using pulses generated by air injection
1/02	. Preparatory heating	5/22	. . . using pulses generated by liquid injection
1/04	. by additives	5/24	. . . Constructional details of jigs, e.g. pulse control devices
1/06	. by varying ambient atmospheric pressure	5/26	. . in sluices
<b>4/00</b>	<b>Separating by pneumatic tables or by pneumatic jigs</b> (sink-float separation using dry heavy media <a href="#">B03B 5/46</a> )	5/28	. by sink-float separation
		5/30	. . using heavy liquids or suspensions
		5/32	. . . using centrifugal force ( <a href="#">centrifuges B04B</a> ; <a href="#">cyclones B04C</a> )
	<b>NOTE</b>	5/34	. . . . Applications of hydrocyclones
	Group <a href="#">B03B 4/005</a> takes precedence over groups <a href="#">B03B 4/02</a> - <a href="#">B03B 4/065</a>	5/36	. . . Devices therefor, other than using centrifugal force ( <a href="#">jigs B03B 5/10</a> )
4/005	. {the currents being pulsating, e.g. pneumatic jigs; combination of continuous and pulsating currents}	5/38	. . . . of conical receptacle type
4/02	. using swinging or shaking tables	5/40	. . . . of trough type
4/04	. using rotary tables or tables formed by travelling belts (separating solids from solids using gas currents and revolving drums <a href="#">B07B 4/06</a> )	2005/405	. . . . . {using horizontal currents}
		5/42	. . . . of drum or lifting wheel type
4/04	. using fixed and inclined tables {; using stationary pneumatic tables, e.g. fluidised beds}	5/44	. . . Application of particular media therefor
4/06	. . {having inclined portions}	5/442	. . . . {composition of heavy media}
		5/445	. . . . . {composition of dry heavy media}
		5/447	. . . . . {recovery of heavy media}
4/065	. . {having inclined portions}	5/46	. . using dry heavy media; Devices therefor
<b>5/00</b>	<b>Washing granular, powdered or lumpy materials; Wet separating</b> (separating by pneumatic tables or by pneumatic jigs <a href="#">B03B 4/00</a> )	5/48	. by mechanical classifiers ( <a href="#">sink-float separation aspects B03B 5/28</a> )
		5/50	. . Rake classifiers
5/02	. using shaken, pulsated or stirred beds as the principal means of separation ( <a href="#">B03B 5/28</a> , <a href="#">B03B 5/48</a> take precedence)	5/52	. . Spiral classifiers
		5/54	. . Drag classifiers
5/04	. . on shaking tables ( <a href="#">on vanners B03B 5/08</a> )	5/56	. . Drum classifiers
5/06	. . . Constructional details of shaking tables, e.g. riffing	5/58	. . Bowl classifiers
5/08	. . on vanners	5/60	. by non-mechanical classifiers, e.g. slime tanks (using shaken, pulsated or stirred beds as the principal means of separation <a href="#">B03B 5/02</a> ; hydraulic classifiers <a href="#">B03B 5/62</a> ; water impulse classifiers <a href="#">B03B 5/68</a> )
5/10	. . on jigs		
5/12	. . . using pulses generated mechanically in fluid	5/62	. by hydraulic classifiers, e.g. of launder, tank, spiral or helical chute concentrator type
5/14	. . . . Plunger jigs		

## B03B

- 5/623 . . {Upward current classifiers}
- 5/626 . . {Helical separators}
- 5/64 . . of the free settling type
- 5/66 . . of the hindered settling type
- 5/68 . . by water impulse ([shaking tables B03B 5/04](#); [jigs B03B 5/10](#); [hydraulic classifiers B03B 5/62](#))
- 5/70 . . on tables or strakes
- 5/72 . . . which are movable
- 5/74 . . . . Revolving tables
  
- 7/00** **Combinations of wet processes or apparatus with other processes or apparatus, e.g. for dressing ores or garbage**
  
- 9/00** **General arrangement of separating plant, e.g. flow sheets**
- 9/005 . {specially adapted for coal}
- 9/02 . specially adapted for oil-sand, oil-chalk, oil-shales, ozokerite, bitumen, or the like
- 9/04 . specially adapted for furnace residues, smeltings, or foundry slags
- 9/06 . specially adapted for refuse
- 9/061 . . {the refuse being industrial}
- 9/062 . . . {the refuse being glass}
- 9/063 . . . {the refuse being concrete slurry}
- 9/065 . . . {the refuse being building rubble}
- 2009/066 . . {the refuse being batteries}
- 2009/067 . . {the refuse being carpets}
- 2009/068 . . {Specific treatment of shredder light fraction}
  
- 11/00** **Feed or discharge devices integral with washing or wet-separating equipment ([filling or emptying devices per se B65G 65/30](#))**
- 2011/002 . {Rotary feeding devices}
- 2011/004 . {Lifting wheel dischargers}
- 2011/006 . {Scraper dischargers}
- 2011/008 . {Screw dischargers}
  
- 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](#))**
- 13/005 . {Methods or arrangements for controlling the physical properties of heavy media ([in relation with groups B03B 5/30 - B03B 5/46](#)), e.g. density, concentration, viscosity}
- 13/02 . using optical effects
- 13/04 . using electrical or electromagnetic effects
- 13/06 . using absorption or reflection of radioactive emanation