

# CPC COOPERATIVE PATENT CLASSIFICATION

**B03D** **FLOTATION; DIFFERENTIAL SEDIMENTATION** (sedimentation in general [B01D 21/00](#); in combination with other separation of solids [B03B](#); sink-float separation [B03B 5/28](#); detergents, soaps [C11D](#))

## WARNINGS

1. The following groups are not complete:

[B03D 1/023](#), see also [B03D 1/02](#)  
[B03D 1/025](#), see also [B03D 1/02](#)  
[B03D 1/026](#), see also [B03D 1/02](#)  
[B03D 1/028](#), see also [B03D 1/02](#)  
[B03D 1/082](#), see also [B03D 1/08](#)  
[B03D 1/085](#), see also [B03D 1/08](#)  
[B03D 1/087](#), see also [B03D 1/08](#)  
[B03D 1/1406](#), see also [B03D 1/14](#)  
[B03D 1/1443](#), see also [B03D 1/14](#)  
[B03D 1/145](#), see also [B03D 1/14](#)  
[B03D 1/1456](#), see also [B03D 1/14](#)  
[B03D 1/1462](#), see also [B03D 1/14](#)  
[B03D 1/1468](#), see also [B03D 1/14](#)  
[B03D 1/1475](#), see also [B03D 1/14](#)  
[B03D 1/1487](#), see also [B03D 1/14](#)  
[B03D 1/1493](#), see also [B03D 1/14](#)  
[B03D 1/242](#), see also [B03D 1/24](#)  
[B03D 1/247](#), see also [B03D 1/24](#)

2. The following IPC groups are not used in the CPC scheme. Subject matter covered by these groups is classified in the following CPC groups:

[B03D 101/00](#)-[B03D 103/10](#) covered by

<b>1/00</b>	<b>Flotation</b> (conditioning for flotation, general arrangement of plan <a href="#">B03B</a> )	1/023	. . {Carrier flotation; Flotation of a carrier material to which the target material attaches}
1/001	. Flotation agents (conditioners <a href="#">B03B 1/00</a> )	1/025	. . {adapted for the flotation of fines}
	<b>NOTES</b>	1/026	. . {Using an immiscible liquid in place of a gas for flotation}
	1. In this group, the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place.	1/028	. . {Control and monitoring of flotation processes; computer models therefor}
	2. In this group, it is desirable to add the appropriate indexing code(s) from each of groups <a href="#">B03D 2201/00</a> or <a href="#">B03D 2203/00</a> .	1/04	. . by varying ambient atmospheric pressure
		1/06	. . differential
		1/08	. Subsequent treatment of concentrated product (froth dispersion <a href="#">B01D 19/02</a> )
1/002	. . Inorganic compounds	1/082	. . {of the froth product, e.g. washing}
1/004	. . Organic compounds	1/085	. . {of the feed, e.g. conditioning, de-sliming}
1/0043	. . . {modified so as to contain a polyether group}	1/087	. . {of the sediment, e.g. regrinding}
1/0046	. . . {containing silicon}	1/10	. . Removing adhering liquid from separated materials (processes or devices capable of general use <a href="#">B01D</a> )
1/006	. . . Hydrocarbons	1/12	. Agent recovery
1/008	. . . containing oxygen	1/14	. Flotation machines (devices for feeding measured quantities of reagents <a href="#">B01J 4/02</a> ; flotation apparatus for enzymology or microbiology <a href="#">C12M 1/09</a> )
1/01	. . . containing nitrogen	1/1406	. . {with special arrangement of a plurality of flotation cells, e.g. positioning a flotation cell inside another}
1/011	. . . . {Quaternary ammonium compounds}	1/1412	. . {with baffles, e.g. at the wall for redirecting settling solids}
1/012	. . . containing sulfur	1/1418	. . {using centrifugal forces}
1/014	. . . containing phosphorus	1/1425	. . . {air-sparged hydrocyclones}
1/016	. . . Macromolecular compounds		
1/018	. . Mixtures of inorganic and organic compounds		
1/02	. Froth-flotation processes		
1/021	. . {for treatment of phosphate ores}		

1/1431	. . {Dissolved air flotation machines}	2203/10	. . . Potassium ores
1/1437	. . {using electroflotation (waste water treatment using electroflotation <a href="#">C02F 1/465</a> )}		
1/1443	. . {Feed or discharge mechanisms for flotation tanks}		
1/145	. . . {Feed mechanisms for reagents (devices for feeding measured quantities of reagents <a href="#">B01J 4/02</a> )}		
1/1456	. . . {Feed mechanisms for the slurry}		
1/1462	. . . {Discharge mechanisms for the froth}		
1/1468	. . . {Discharge mechanisms for the sediments}		
1/1475	. . . {Flotation tanks having means for discharging the pulp, e.g. as a bleed stream}		
1/1481	. . {with a plurality of parallel plates}		
1/1487	. . {Means for cleaning or maintenance}		
1/1493	. . {with means for establishing a specified flow pattern}		
1/16	. . with impellers; Subaeration machines {(mixing gases or vapours with liquids <a href="#">B01F 3/04</a> )}		
1/18	. . . without air supply		
1/20	. . . with internal air pumps		
1/22	. . . with external blowers		
1/24	. . Pneumatic {(mixing gases or vapours with liquids <a href="#">B01F 3/04</a> )}		
1/242	. . . {Nozzles for injecting gas into the flotation tank}		
1/245	. . . {Injecting gas through perforated or porous area}		
1/247	. . . {Mixing gas and slurry in a device separate from the flotation tank, i.e. reactor-separator type}		
1/26	. . . Air lift machines		
<b>3/00</b>	<b>Differential sedimentation</b>		
3/02	. Coagulation		
3/04	. . assisted by vibrations		
3/06	. Flocculation		
<b>2201/00</b>	<b>Specified effects produced by the flotation agents (use of substances as emulsifying, wetting, dispersing or foam-producing agents <a href="#">B01F 17/00</a>)</b>		
2201/002	. Coagulants and Flocculants		
2201/005	. Dispersants		
2201/007	. Modifying reagents for adjusting pH or conductivity		
2201/02	. Collectors		
2201/04	. Frothers		
2201/06	. Depressants		
<b>2203/00</b>	<b>Specified materials treated by the flotation agents; specified applications (paper pulp processing <a href="#">D21F 1/70</a>, de-inking of paper pulp <a href="#">D21B 1/325</a>)</b>		
2203/001	. Agricultural products, food, biogas, algae		
2203/003	. Biotechnological applications, e.g. separation or purification of enzymes, hormones, vitamins, viruses		
2203/005	. Fine and commodity chemicals		
2203/006	. Oil well fluids, oil sands, bitumen		
2203/008	. Water purification, e.g. for process water recycling (waste water treatment <a href="#">C02F 1/24</a> )		
2203/02	. Ores		
2203/025	. . Precious metal ores		
2203/04	. . Non-sulfide ores		
2203/06	. . . Phosphate ores		
2203/08	. . . Coal ores, fly ash or soot		