

Title (en)  
**MINERALS SEPARATOR**

Publication  
**EP 0323447 A3 19931124 (EN)**

Application  
**EP 89200433 A 19870521**

Priority  
• EP 89200433 A 19870521  
• GB 8612498 A 19860522

Abstract (en)  
[origin: EP0323447A2] To separate minerals, they are made up into a slurry A applied via a distributor ring 211 to a hollow tapered cylinder spinning on its axis to generate 10g centrifugal force. The cylinder widens at a half-angle of 1 DEG , and its axis is inclined at 2 DEG upwardly in the direction of widening. A film of slurry is held centrifugally to the internal surface of the cylinder. The denser (i.e. higher specific gravity) particles in the slurry tend to move preferentially radially outwardly (centrifugally) and to move downwardly in the boundary layer (under Earth's gravity). The action of the washing water B is to displace waste accidentally entrained with the higher-specific-gravity-particles. The valuable higher-specific-gravity particles overflow downwardly continuously at C and are collected. The washing water and lower-specific-gravity waste particles move upwardly towards the top edge of the cylinder at C, but are repeatedly swept downwardly by staggered vanes 213 rotating faster than the cylinder. The water and light particles therefore overflow at C but only after numerous 'attempts' each of which improves the reliability of the separation.

IPC 1-7  
**B03B 5/00**

IPC 8 full level  
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CPC (source: EP)  
**B03B 5/00** (2013.01); **B03B 11/00** (2013.01)

Citation (search report)  
• [X] US 3754660 A 19730828 - COTTRELL H  
• [Y] US 2076516 A 19370406 - EUGENE ROBERTS  
• [X] GB 2003757 A 19790321 - KALIN E  
• [X] GB 217264 A 19240619 - LILLESHELL COMPANY LTD, et al  
• [A] DE 3309385 A1 19840920 - KLOECKNER HUMBOLDT DEUTZ AG [DE]

Designated contracting state (EPC)  
DE FR GB IT SE

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**EP 0323447 A2 19890705; EP 0323447 A3 19931124**

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