

Title (en)
PROCESS AND APPARATUS FOR THE SEPARATION OF HEAVIER FROM LIGHTER FRACTIONS IN AQUEOUS SLURRIES BY MEANS OF CENTRIFUGAL FORCE

Title (de)
VERFAHREN UND VORRICHTUNG ZUM ABSCHIEDEN DER SCHWEREREN VON DEN LEICHTEREN ANTEILEN WÄSSRIGER TRÜBEN MITTELS ZENTRIFUGALKRAFTWIRKUNG

Title (fr)
PROCEDE ET DISPOSITIF POUR SEPARER LES FRACTIONS PLUS LOURDES DES FRACTIONS PLUS LEGERES D'EAUX BOUEUSES PAR EFFET DE FORCE CENTRIFUGE

Publication
EP 0904156 A1 19990331 (DE)

Application
EP 97919374 A 19970417

Priority

- DE 19616602 A 19960425
- DE 19625456 A 19960626
- DE 19646494 A 19961111
- EP 9701913 W 19970417

Abstract (en)
[origin: WO9740944A1] The invention relates to a process and apparatus for the separation of heavier from lighter fractions in aqueous slurries by means of centrifugal force. The slurry is made to spin in the separation chamber under the influence of the differential pressure generated between the inlet and outlet of a cyclone separation chamber (4). The differential pressure, which can amount to several bar, is generated by means of a pressure increasing stage in the form of a transport rotor device (20) which acts in conjunction with a stator arrangement (22); essentially this takes place immediately in front of the inlet of the slurry into the separation chamber (4). The rotor blades of the cyclone rotor device (10) as the rotor blades of the transport rotor device (20) can be mounted on the same rotary shaft (5) in order to induce additional rotary force into the slurry. The separation of floatable fractions in aqueous slurries is effected by the presence of micro gas bubbles introduced into the separation chamber (4). The separated floatable fractions can be removed from the gas bubbles to which they adhere by means of an anti-foaming device driven by the rotary shaft (5) of the transport rotor device (20).

IPC 1-7
B04C 5/02; B04C 3/06; B04C 9/00; B03D 1/24

IPC 8 full level
B03B 5/34 (2006.01); **B03D 1/14** (2006.01); **B03D 1/24** (2006.01); **B04C 3/06** (2006.01); **B04C 3/00** (2006.01); **B04C 5/02** (2006.01); **B04C 9/00** (2006.01)

CPC (source: EP)
B03B 5/34 (2013.01); **B03D 1/1418** (2013.01); **B03D 1/1431** (2013.01); **B03D 1/1456** (2013.01); **B03D 1/1462** (2013.01); **B03D 1/24** (2013.01); **B04C 3/06** (2013.01); **B04C 5/02** (2013.01); **B04C 9/00** (2013.01); **B04C 2009/007** (2013.01)

Cited by
DE102005009683B4

Designated contracting state (EPC)
AT BE DE DK ES FR GB IT NL PT SE

DOCDB simple family (publication)
WO 9740944 A1 19971106; AT E203431 T1 20010815; AU 2387397 A 19971119; DE 59704134 D1 20010830; EP 0904156 A1 19990331; EP 0904156 B1 20010725; ES 2162280 T3 20011216; HK 1018889 A1 20000107; JP 2000508968 A 20000718; JP 4047386 B2 20080213

DOCDB simple family (application)
EP 9701913 W 19970417; AT 97919374 T 19970417; AU 2387397 A 19970417; DE 59704134 T 19970417; EP 97919374 A 19970417; ES 97919374 T 19970417; HK 99104026 A 19990917; JP 53851197 A 19970417