

Title (en)
SCREW-TYPE SOLID BOWL CENTRIFUGE

Title (de)
VOLLMANTEL-SCHNECKENZENTRIFUGE

Title (fr)
CENTRIFUGEUSE A VIS SANS FIN A BOL PLEIN

Publication
EP 1968749 A1 20080917 (DE)

Application
EP 06841363 A 20061214

Priority
• EP 2006069718 W 20061214
• DE 102005061461 A 20051222

Abstract (en)
[origin: DE102005061461A1] A solid bowl-helical conveyor centrifuge for directly separating oil from solid or water mixture, exhibits a rotatable drum (35) with a tapering cylindrical area, and a rotatable helical conveyor with a conveyor body (3) surrounded by a main conveyor sheet (5). Helical threads form the conveyor body. A conveyor strip is arranged between the helical threads for conveying centrifuged material to be processed. Additional sheet segments are arranged in the conveyor strip, which is segmented between the adjacent helical threads. The solid bowl-helical conveyor centrifuge for directly separating oil from solid or water mixture, exhibits a rotatable drum (35) with a tapering cylindrical area, and a rotatable helical conveyor with a conveyor body (3) surrounded by a main conveyor sheet (5). Helical threads form the conveyor body. A conveyor strip is arranged between the helical threads for conveying centrifuged material to be processed. Additional sheet segments are arranged in the conveyor strip, which is segmented between the adjacent helical threads. The conveyor sheet is arranged in the area of the sheet segments with cavities in such a manner that the centrifuged material flows between the sheet segments. Two helical threads of the sheet segments are arranged in the conveyor strip. A part of the sheet segments in a first helical thread is arranged towards the tapered segments turned forwardly relative to the main helical conveyor sheet. Further parts of the sheet segments are arranged parallel to the main helical conveyor sheet. An auxiliary conveyor sheet in the helical thread is arranged in the tapered area of the conveyor and covers the total tapered area of the conveyor. The sheet segments in the helical threads lying near to the fluid discharge, are arranged parallel to the main conveyor sheet. The cavities of external circumference of the main conveyor sheet inwardly extend itself in window like manner and covers only two helical threads. A stump area of the main conveyor sheet remains stand at the conveyor body. The sheet segments are radially formed less highly than the remaining main conveyor sheet. A barrier device in the helical thread is arranged between the cylindrical section and the conical section and is formed out of barrier sheet metals that close the helical thread transverse to the conveyor blade up to a given radius. Two dividers axially with one another are shifted towards the helical axis A and are arranged in the helical body with first and second inlet openings (17, 19). The helical conveyor shows a changeable inlet tube (15). The first or the second inlet openings are useful for a two-phase separation and a three-phase separation of the oil by the axial length of the interchangeable inlet tube. The second auxiliary conveyor sheet in the conveyor strip is arranged in the area of the first divider over a limited axial area that is larger or same axial length of its inlet opening. The auxiliary conveyor sheet shows a slight radial extension than the first conveyor sheet. The second auxiliary conveyor sheet shows radial height of oil phase, which is easily collected in the operation interior. The auxiliary conveyor sheet of the conveyor strip detaches an auxiliary path, which is narrower than the main path and which lies on the back side of the main conveyor sheet relative to the conical section.

IPC 8 full level
B04B 1/20 (2006.01)

CPC (source: EP US)
B04B 1/20 (2013.01 - EP US); **B04B 2001/2033** (2013.01 - EP US); **B04B 2001/2041** (2013.01 - EP US); **B04B 2001/205** (2013.01 - EP US); **Y10S 494/901** (2013.01 - EP US)

Citation (search report)
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