

Title (en)

Method of and device for putting apart spherical materials possibly showing imperfections.

Title (de)

Verfahren und Vorrichtung zur Trennung kugelförmigen Materialien oder von solchen deren Kugelform mangelhaft ist.

Title (fr)

Procédé et appareillage destinés à réaliser la séparation de matériaux sphériques présentant ou non des imperfections.

Publication

EP 0223639 A1 19870527 (FR)

Application

EP 86402142 A 19861001

Priority

FR 8515947 A 19851023

Abstract (en)

[origin: EP0223639B1] 1. A process for fractionating between them solid balls of different sizes or solid balls with solid fragments or chips, the flow of the mixture to be separated being sent onto the turns of at least one spiral whose the width is from about 50 to 400 mm, the spiral containing at least two turns, the width of one turn being comprised between 50 and 150 mm, the slope of a turn being between 2 and 20 degrees, the spiral being subjected to a vibrational motion applied on the axis of the spiral, process characterized in that said vibrational motion is lateral, the amplitude of said vibrational motion being from 0.2 to 15 mm, the vibrations accordingly imparting movements in opposite directions of the balls or chips, the smallest balls when it is desired to separate ball of different diameter (or the chips when it is desired to separate balls from chips) (or chips and the smallest balls when it is desired to separate on the one hand balls and on the other hand the smallest balls and the chips), flowing up tramping along the turns, mostly between the inner edges of conveying strip of each turn and the median part of the circulation surface bordered by the surface of the spiral, towards the upper end of the spiral they are withdrawn thereof, the biggest balls flowing down, mostly between the outer edges of the strip of each turn and the said median part of the turn, towards the lower end of the spiral they are withdrawn thereof.

Abstract (fr)

L'invention concerne un procédé et un appareillage pour la séparation de matières pulvérulentes, sous forme de billes ou de granulés. Elle est caractérisée par l'emploi d'un élévateur vibrant hélicoïdal (4) soumis à des vibrations dont l'amplitude est choisie de façon à provoquer sur les pas (5) de la spire la circulation ascendante des particules dont on veut se débarrasser, en maintenant la descente vers le bas de la spire des particules à récupérer. L'invention permet notamment de séparer des billes rondes de billes cassées.

IPC 1-7

B07B 13/11

IPC 8 full level

B07B 13/11 (2006.01)

CPC (source: EP US)

B07B 13/11 (2013.01 - EP US)

Citation (search report)

- [A] US 3464550 A 19690902 - BIELER BARRIE H, et al
- [A] US 2936072 A 19600510 - GRAY THOMAS J
- [A] US 2724498 A 19551122 - BERESFORD DAVID O
- [A] GB 2108871 A 19830525 - SHELL INT RESEARCH
- [A] EP 0075345 A2 19830330 - SHELL INT RESEARCH [NL]

Cited by

CN106111544A; US4839031A; US5082552A; EP0274924B1

Designated contracting state (EPC)

BE DE GB IT LU NL

DOCDB simple family (publication)

FR 2588783 A1 19870424; FR 2588783 B1 19880115; CA 1315738 C 19930406; DE 3674156 D1 19901018; EP 0223639 A1 19870527; EP 0223639 B1 19900912; JP 2620854 B2 19970618; JP S62168583 A 19870724; US 4986424 A 19910122

DOCDB simple family (application)

FR 8515947 A 19851023; CA 521256 A 19861023; DE 3674156 T 19861001; EP 86402142 A 19861001; JP 25351486 A 19861023; US 48168790 A 19900220