Title (en)

Apparatus for drying finely divided solids.

Title (de)

Vorrichtung zur Trocknung feinteiliger Feststoffe.

Title (fr)

Dispositif de séchage de matières solides réduites en petites particules.

Publication

EP 0354292 A1 19900214 (DE)

Application

EP 89100216 A 19890107

Priority

DE 3826047 A 19880730

Abstract (en)

[origin: JPH0278888A] PURPOSE: To continuously dry a fine solid material able to generate thermally insulating action during drying at the temperature of 70 deg.C or higher, by a method wherein an outer tube is made up of a number of tube sections comprising a material transmitting infrared rays, the upper end of each of the tube sections forms a hopper with a collar and a spacer is fixed at each lower end thereof to arrange a heating source spaced from the outer tube. CONSTITUTION: Wet particulate material 11a is supplied into a drying chamber 1 with the inner diameter thereof of about 5.5 cm-6.5 cm through a supply pipe piece 10 from a loading tank 12. The particulate material 11a is heated by a resistance heater 18 and an auxiliary heating source 13 in the drying chamber. The steam currently generated escapes as indicated by the arrow 26 into a chamber between an outer tube and a protective pipe 14 through a hopper-shaped end part of a tube section 3 while being discharged through a steam discharge tube piece 21. The wet particulate material 11a slides down during the drying process and in this case, the flowing past speed of the particulate material to be dried is prescribed by the carry-out quantity of a conveying device adapted to condition and carry out the dried particulate material 11b.

Abstract (de)

Es wird eine Vorrichtung zur kontinuierlichen Trocknung von feinteiligen Feststoffen bei Temperaturen im Bereich von 800 bis 1000 °C durch Verdampfen anhaftender Feuchtigkeit beschrieben. Der vertikale Trockenraum (1) wird durch den Zwischenraum zwischen einem Innen (2)- und Außenrohr (3) gebildet. Das Außenrohr (3) ist von einer Heizquelle (18) (elektrische Widerstandsheizung, Infrarotstrahler) umgeben und ist aus meheren, ineinandergesteckten Rohrabschnitten (3) gebildet, deren oberes Ende (4,5) trichterförmig ausgebildet ist, in das das untere glatte Ende des darüber angeordneten Rohrabschnitten (3) hineinragt. Zwischen den ineinandergesteckten Rohrenden sind Abstandselemente (6) vorgesehen. Die Rohrabschnitte (3) bestehen aus infrarotstrahlung-durchlässigem Werkstoff.

IPC 1-7

F26B 3/30; F26B 17/16; F26B 23/04

IPC 8 full level

F26B 3/30 (2006.01); **F26B 17/16** (2006.01); **F26B 23/04** (2006.01)

CPC (source: EP US)

F26B 3/30 (2013.01 - EP US); **F26B 17/16** (2013.01 - EP US); **F26B 23/04** (2013.01 - EP US)

Citation (search report)

- [A] GB 765911 A 19570116 - BELA THOMAS SANDOR
- [A] US 884230 A 19080407 - SPIVAK FRANK A [US]
- [A] GB 688570 A 19530311 - GLOVER & CO LTD W T
- [A] DE 365877 C 19221222 - MEGUIN AKT GES, et al
- [A] GB 954572 A 19640408 - HEAD WRIGHTSON & CO LTD
- [A] FR 1453810 A 19660722 - INST BADAN JADROWYCH
- [A] WO 8802090 A1 19880324 - CH KT INSTI [SU]
- [A] DE 22653 C 18830724
- [A] EP 0124294 A2 19841107 - CACTUS MACHINERY INC [CA]
- [A] US 685336 A 19011029 - LEROY PROSPER [FR], et al

Cited by

EP1566604A4; WO2010089721A1

Designated contracting state (EPC)

AT BE CH DE FR GB IT LI NL

DOCDB simple family (publication)

EP 0354292 A1 19900214; DE 3826047 A1 19900201; DE 3826047 C2 19900712; JP H0278888 A 19900319; JP H0723832 B2 19950315; US 4964227 A 19901023

DOCDB simple family (application)

EP 89100216 A 19890107; DE 3826047 A 19880730; JP 19702689 A 19890731; US 32972689 A 19890327