

Title (en)

Junction device between a rotary kiln and planetary coolers.

Title (de)

VerbindungsVorrichtung zwischen einem Drehrohrföfen und Satellitenkühlrohren.

Title (fr)

Dispositif de jonction entre un four rotatif et des tubes satellites.

Publication

EP 0015349 A1 19800917 (FR)

Application

EP 79400153 A 19790308

Priority

EP 79400153 A 19790308

Abstract (en)

1. Joining device between a cooling tube (2) and an inclined rotary furnace (1) for firing a granular material, around which a plurality of cooling tubes (2) are arranged as satellites, which have axes parallel to that of the furnace (1) and which are rotating integrally with it, each tube (2) being linked to the interior of the furnace (1) by means of a connecting pipe (3) connected tangentially, on the front side in the direction of rotation, to the upper end of the tube, this being closed by a wall (5) inclined relative to the axis of the tube (2) in the downstream direction of advance of the material and intersecting the wall of the tube (2) along an edge of intersection (51) which winds spirally round the axis of the tube (2) up to a point K offset angularly downstream, characterized in that the closing wall (5) has the form of a portion of a cylinder of revolution, the generating lines of which are parallel to the upstream part of the contour of the outflow orifice (32) of the connecting pipe (3) at the point I of contact between the pipe (3) and the tube (2), in such a way that the edge of intersection (51) coincides over a certain distance with the said upstream part of the outflow orifice (32), and in that, in the discharge zone, the closing wall (5) forms together with the wall of the tube (2) a channel (54), the bottom of which consists of the said spiral edge (51) and in which the material accumulates at the start of its discharge, to form a protective cushion, the said channel (54) having, in a section through a plane transverse to the axis of the tube (2), the form of a V opening underneath the outflow orifice (32) of the connecting pipe (34), the closing wall (5) being directed in such a way as to become inclined downwards during the rotation of the tube after discharge of the material.

Abstract (fr)

L'invention a pour objet un dispositif de jonction entre un tube de refroidissement et un four rotatif incliné de cuisson d'une matière, autour duquel sont disposés en satellites une pluralité de tubes de refroidissement avec l'intérieur du four chacun par un conduit de liaison débouchant dans le tube au-dessus d'un coude de jonction constitué par une paroi de guidage de la matière fermant l'extrémité amont du tube. Selon l'invention au moins dans la zone de déversement de la matière, au-dessous de l'orifice de sortie 32 du conduit de liaison, la paroi de guidage 5 forme avec la paroi du tube 2 une goulotte à section en V dont le fond est constitué par l'arête 51 d'intersection des deux parois et que ladite arête 51 s'enroule autour de l'axe du tube 2 sur au moins un quart de tour en formant sensiblement une hélice dont le pas est supérieur à celui correspondant à la vitesse d'avancement de la matière sous l'effet de l'inclinaison et de la rotation du tube 2 autour du four 1. L'invention s'applique spécialement aux refroidisseurs des fours de cimenterie.

IPC 1-7

F27B 7/38; C04B 7/44

IPC 8 full level

F27B 7/40 (2006.01)

CPC (source: EP)

F27B 7/40 (2013.01)

Citation (search report)

- FR 2268235 A1 19751114 - POLYSIUS AG [DE]
- US 3792961 A 19740219 - THEIL S
- FR 2154124 A5 19730504 - SMIDTH & CO AS F L
- FR 2154125 A5 19730504 - SMIDTH & CO AS F L

Designated contracting state (EPC)

BE DE GB IT

DOCDB simple family (publication)

EP 0015349 A1 19800917; **EP 0015349 B1 19831005**; DE 2966242 D1 19831110

DOCDB simple family (application)

EP 79400153 A 19790308; DE 2966242 T 19790308