

Title (en)  
DEVICE FOR THE COOLING OF BULK PRODUCTS

Title (de)  
VORRICHTUNG ZUM KÜHLEN VON SCHÜTTGUT

Title (fr)  
DISPOSITIF DE REFROIDISSEMENT D'UN PRODUIT EN VRAC

Publication  
**EP 2044378 B1 20100915 (DE)**

Application  
**EP 07785969 A 20070710**

Priority  

- EP 2007006103 W 20070710
- EP 06015148 A 20060720
- EP 07785969 A 20070710

Abstract (en)  
[origin: EP1881287A1] The device for cooling bulk material e.g. cement clinker from upstream process stage of oven, comprises a grate (3) with a mechanism for supplying cooling gas, a tub for arranging a supporting structure and a dispersion element on its edge, and a material sump intended to a conveying direction (60) on the side of the dispersion element. The grate conveys a layer of the bulk material along the conveying direction, has conveying elements and forms an even support surface for the layer of the bulk material. The support surface is partly provided with a laminar exhaust mechanism. The device for cooling bulk material e.g. cement clinker from upstream process stage of oven, comprises a grate (3) with a mechanism for supplying cooling gas, a tub for arranging a supporting structure and a dispersion element on its edge, and a material sump intended to a conveying direction (60) on the side of the dispersion element. The grate conveys a layer of the bulk material along the conveying direction, has conveying elements and forms an even support surface for the layer of the bulk material. The support surface is partly provided with a laminar exhaust mechanism that comprises a spatially enlarged dispersion element, on which the bulk material directly rests, and the supporting structure arranged under it. The tub has a supply connection at the bottom for the cooling gas. The dispersion element and the supporting structure are combined into modules, which are arranged exchangeably at the grate and which are intended in matrix arrangement. Footpaths projecting on the grate and or its boards are arranged in the bulk material transverse to the conveying direction. The supporting structure connects the together-bordering modules directly to each other, and is formed as a supporting grid, which is arranged on plate elements arranged in cross connection. The dispersion element and the supporting structure are arranged in a movable element of the grate. The dispersion element is formed from the support surface of the grate in projecting manner. Frames that are oriented in the conveying direction, are intended on the boards, which form troughs holding together with the footpaths. The frames are arranged at sidewalls of the boards. An additional frame is arranged at inner side of a sealing section of the boards.

IPC 8 full level  
**F27D 15/02** (2006.01)

CPC (source: EP US)  
**F27D 15/0213** (2013.01 - EP US); **F27D 15/022** (2013.01 - EP US)

Cited by  
EP2655994B1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**EP 1881287 A1 20080123**; AT E481608 T1 20101015; CN 101490492 A 20090722; DE 502007005065 D1 20101028; EA 014357 B1 20101029; EA 200900150 A1 20090630; EP 2044378 A1 20090408; EP 2044378 B1 20100915; US 2009249637 A1 20091008; WO 2008009374 A1 20080124; WO 2008009374 A8 20080228

DOCDB simple family (application)  
**EP 06015148 A 20060720**; AT 07785969 T 20070710; CN 200780027243 A 20070710; DE 502007005065 T 20070710; EA 200900150 A 20070710; EP 07785969 A 20070710; EP 2007006103 W 20070710; US 37425607 A 20070710