

Title (en)
EXPANDED GRANULAR MATERIAL CONSISTING OF MINERAL MATERIAL

Title (de)
GEBLÄHTES GRANULAT AUS MINERALISCHEM MATERIAL

Title (fr)
MATÉRIAU GRANULAIRE EXPANSÉ CONSTITUÉ D'UN MATÉRIAU MINÉRAL

Publication
EP 4010293 A1 20220615 (DE)

Application
EP 20775638 A 20200923

Priority
• EP 19199056 A 20190923
• EP 2020076555 W 20200923

Abstract (en)
[origin: CA3153978A1] The invention relates to a method for producing an expanded granular material from a sand grain-like mineral material having a bound blowing agent, for example for producing an expanded granular material from perlite sand. The sand grain-like mineral material is introduced into a feed opening at one end of a furnace shaft, conveyed along a thermal treatment section in a conveying direction, preferably by force of gravity, and heated to a critical temperature while being conveyed through the thermal treatment section, wherein the sand grain-like mineral material plasticizes starting at said temperature and begins to expand as a result of the blowing agent, and the expanded granular material is discharged at the other end of the furnace shaft. The aim of the invention is to improve the versatility of the expanded granular material. According to the invention, this is achieved in that the sand grain-like mineral material is heated to a second temperature above the critical temperature after being heated to the critical temperature, said second temperature lying below a third temperature at which the surface of the expanded granular material bursts, and in that the second temperature is selected on the basis of a desired density of the expanded granular material such that a part of the blowing agent remains bound in the granular material.

IPC 8 full level
C04B 14/18 (2006.01); **C04B 20/06** (2006.01); **C04B 26/26** (2006.01)

CPC (source: EP IL US)
C04B 14/185 (2013.01 - EP IL US); **C04B 20/06** (2013.01 - EP IL); **C04B 26/26** (2013.01 - EP IL US)

C-Set (source: EP)
C04B 26/26 + C04B 14/185

Citation (search report)
See references of WO 2021058556A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3795548 A1 20210324; CA 3153978 A1 20210401; CA 3153978 C 20240611; EP 4010293 A1 20220615; IL 291411 A 20220501; MX 2022001917 A 20220317; US 2022340489 A1 20221027; WO 2021058556 A1 20210401

DOCDB simple family (application)
EP 19199056 A 20190923; CA 3153978 A 20200923; EP 2020076555 W 20200923; EP 20775638 A 20200923; IL 29141122 A 20220316; MX 2022001917 A 20200923; US 202017762453 A 20200923