

Title (en)

A METHOD FOR THE MECHANICAL ACTIVATION OF POWDERS BY MEANS OF BALLS

Title (de)

VERFAHREN ZUR MECHANISCHEN AKTIVIERUNG VON PULVERN MITHILFE VON KUGELN

Title (fr)

PROCÉDÉ D'ACTIVATION MÉCANIQUE DE POUDRES AU MOYEN DE BILLES

Publication

EP 3713674 A1 20200930 (EN)

Application

EP 18833503 A 20181120

Priority

- IT 201700133249 A 20171121
- IB 2018059128 W 20181120

Abstract (en)

[origin: WO2019102345A1] The present invention relates to a method for the mechanical activation by means of balls of metal, semi-metal and/or non-metal powders (metal oxides, semimetal oxides, carbides, carbon and polymers) comprising: a) Providing a resonant acoustic mixer with vertical, horizontal or combined action; b) Providing an activation vessel, where the inner volume of said vessel is between 8 and 160 ml, preferably between 8 and 80 ml; c) Selecting balls and loading them in said vessel until obtaining a value of AVSF (Apparent Volumetric Sphere Filling) between 10% and 90%, preferably between 40% and 70%; d) Loading the powder (s) in said vessel; e) Optionally, adding a process controller (PCA) in said vessel; f) Optionally, bringing said vessel to volume with one or more gases; g) Closing said vessel and bringing said mixer to an acceleration above 50 G, preferably between 70 and 100 G, for a total process time between 5 and 480 min, preferably between 10 and 90 minutes.

IPC 8 full level

B02C 17/04 (2006.01); **B02C 17/14** (2006.01); **B02C 17/18** (2006.01)

CPC (source: EP)

B02C 17/04 (2013.01); **B02C 17/14** (2013.01); **B02C 17/186** (2013.01)

Citation (search report)

See references of WO 2019102345A1

Cited by

IT202100017624A1

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)

WO 2019102345 A1 20190531; EP 3713674 A1 20200930

DOCDB simple family (application)

IB 2018059128 W 20181120; EP 18833503 A 20181120