

Title (en)

VERTICAL BALL MILL, STATOR SEGMENT FOR A VERTICAL BALL MILL AND METHOD FOR MAINTAINING A VERTICAL BALL MILL

Title (de)

VERTIKALE KUGELMÜHLE, STATORSEGMENT FÜR EINE VERTIKALE KUGELMÜHLE UND VERFAHREN ZUM WARTEN EINER VERTIKALEN KUGELMÜHLE

Title (fr)

BROYEUR VERTICAL À BOULETS, SEGMENT DE STATOR POUR BROYEUR VERTICAL À BOULETS, ET PROCÉDÉ D'ENTRETIEN D'UN BROYEUR VERTICAL À BOULETS

Publication

EP 3840890 B1 20230621 (DE)

Application

EP 19769145 A 20190913

Priority

- DE 102018122540 A 20180914
- EP 2019074550 W 20190913

Abstract (en)

[origin: CA3111689A1] The invention relates to a vertical ball mill (100), in particular for the pre-grinding of minerals, comprising: a rotor (204), which is axially and radially supported at an upper end and hangs downward; a stator (102), which radially extends around the rotor (204), is not loaded by the weight of the rotor (204), stands in a self-supporting manner and has a lateral surface that is oriented tangentially to the rotor (204) and that is approximately cylindrical within a shape tolerance; and a base plate (200), which supports the weight of the stator (102), wherein: the stator (102) is composed of at least two stator segments (112), which can be separated from one another, stand unsupported in the separated state and can be moved relative to one another; each of the stator segments (112) has, on at least one side edge of a wall (116) which forms the lateral surface (104), which side edge runs from a top edge of the wall (116) to a bottom edge of the wall (116), a sealing surface for sealing to the other stator segment (112), and has, on the bottom edge, a standing surface (122) dimensioned appropriately for the load, for sealing to the base plate (200); the stator segment (112) rests standing orthogonally on a load-bearing surface (201) of the base plate (200) within an angular tolerance, with the standing surface (122) on the base plate (200).

IPC 8 full level

B02C 17/16 (2006.01)

CPC (source: EP US)

B02C 17/002 (2013.01 - US); **B02C 17/16** (2013.01 - EP US); **B02C 17/18** (2013.01 - EP); **B02C 17/22** (2013.01 - EP)

Citation (opposition)

Opponent : Omya International AG

- WO 2018138405 A1 20180802 - OUTOTEC FINLAND OY [FI], et al
- US 10058872 B2 20180828 - BORGES TYLER [CA], et al
- US 5894998 A 19990420 - SCHALL GISBERT [US], et al
- EP 0771591 A1 19970507 - KOTOBUKI GIKEN KOGYO KK [JP]
- DE 3943826 B4 20041209 - BUEHLER AG [CH]
- US 4174074 A 19791113 - GEIGER ARMIN [CH]
- IT BO20090605 A1 20110324 - SAMIA S P A
- DE 1901593 A1 19700827 - DRAISWERKE GMBH
- OUTOTECOYJ: "Outotec HIGmill – Energy efficient fine grinding", XP093184471, Retrieved from the Internet <URL:<https://www.youtube.com/watch?v=U3jkUNNgXIk>>

Designated contracting state (EPC)

AL AT BE BG CH CY CZ 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

DOCDB simple family (publication)

DE 102018122540 B3 20191121; AU 2019338944 A1 20210304; BR 112021003729 A2 20210525; CA 3111689 A1 20200319;

CL 2021000513 A1 20210813; DK 3840890 T3 20230821; EP 3840890 A1 20210630; EP 3840890 B1 20230621; ES 2952958 T3 20231107; FI 3840890 T3 20230818; MX 2021003003 A 20210811; PE 20211487 A1 20210809; US 11944976 B2 20240402; US 2022118459 A1 20220421; WO 2020053419 A1 20200319; ZA 202100900 B 20220126

DOCDB simple family (application)

DE 102018122540 A 20180914; AU 2019338944 A 20190913; BR 112021003729 A 20190913; CA 3111689 A 20190913; CL 2021000513 A 20210301; DK 19769145 T 20190913; EP 19769145 A 20190913; EP 2019074550 W 20190913; ES 19769145 T 20190913; FI 19769145 T 20190913; MX 2021003003 A 20190913; PE 2021000325 A 20190913; US 201917275472 A 20190913; ZA 202100900 A 20210210