

Title (en)
STAVE PROTECTION SYSTEM

Title (de)
PLATTENKÜHLERSCHUTZSYSTEM

Title (fr)
SYSTÈME DE PROTECTION DE DOUVE

Publication
EP 4043589 B1 20230830 (EN)

Application
EP 22157392 A 20180315

Priority
• EP 22157392 A 20180315
• EP 18161931 A 20180315

Abstract (en)
[origin: EP3540081A1] A stave protection system for a metallurgical furnace comprises: a stave (100) comprising a plurality of recesses (110) arranged on a front face (102) of the stave (100); and a plurality of inserts (200) each being received by a respective one of the recesses (110), the inserts (200) so received projecting from the front face (102) of the stave (100) such that, in use, furnace burden material is trapped by the inserts (200) so as to provide a protective layer of the burden material on the front face (102) of the stave (100). Each insert (200) comprises a set of segments (202a-f) and a retainer which forces the segments (202a-f) against a surface (110b) of the respective recess (110), such that the segments (202a-f) are secured in the recess (110) by frictional contact with the surface (110b) of the recess (110).

IPC 8 full level
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C21B 7/02 (2013.01 - KR); **C21B 7/10** (2013.01 - CN EP KR); **C21C 5/4646** (2013.01 - KR); **F27B 1/24** (2013.01 - EP KR); **F27B 3/24** (2013.01 - EP KR); **F27D 1/0033** (2013.01 - KR); **F27D 1/12** (2013.01 - EP KR); **F27D 9/00** (2013.01 - EP KR); **C21C 5/4646** (2013.01 - EP); **F27D 2009/0032** (2013.01 - EP KR); **F27D 2009/0045** (2013.01 - EP KR)

Citation (opposition)
Opponent : Paul Wurth S.A.
• JP H0394008 A 19910418 - SUMITOMO METAL IND
• WO 0229122 A1 20020411 - WURTH PAUL SA [LU], et al
• JP 2001073017 A 20010321 - NKK PLANT ENG CORP
• WO 2009147192 A1 20091210 - WURTH PAUL SA [LU], et al
• DE 2907511 A1 19800911 - KABEL METALLWERKE GHH, et al
• WO 2010119013 A1 20101021 - WURTH PAUL SA [LU], et al
• WO 2015097073 A1 20150702 - WURTH PAUL SA [LU]
• US 3623717 A 19711130 - MALONEY LAWRENCE G, et al
• CN 202214370 U 20120509 - SHANTOU HUAXING METALLURG EQUIPMENT CO LTD
• JP 2016194131 A 20161117 - NISSHIN STEEL CO LTD, et al

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

DOCDB simple family (publication)
EP 3540081 A1 20190918; **EP 3540081 B1 20220921**; CN 110273034 A 20190924; CN 110273034 B 20230428; CN 210826223 U 20200623; EP 4043589 A1 20220817; EP 4043589 B1 20230830; JP 2021518522 A 20210802; JP 7237977 B2 20230313; KR 20200132867 A 20201125; WO 2019175245 A1 20190919

DOCDB simple family (application)
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