

Title (en)
STRUCTURE FOR TUYERE SECTION IN BLAST FURNACE

Title (de)
STRUKTUR FÜR DÜSENABSCHNITT IN HOCHOFEN

Title (fr)
STRUCTURE POUR SECTION DE TUYÈRE DANS UN HAUT-FOURNEAU

Publication
EP 2848705 A4 20160120 (EN)

Application
EP 13788617 A 20130510

Priority
• JP 2012110071 A 20120511
• JP 2013063139 W 20130510

Abstract (en)
[origin: EP2848705A1] A a tuyere structure in a blast furnace prevents gas leakage and keeps a position of an end of a tuyere at a predetermined position in a furnace body while absorbing a difference in thermal deformation between the furnace body and a bustle pipe. The tuyere structure (20) in a blast furnace includes: a blowpipe (31) fixed to a furnace shell (21); a tuyere (32) fixed to an end of the blowpipe (31); and a flexible joint (34) that connects the blowpipe 31 to a tuyere stock (33). A tuyere stave-cooler (23) is provided inside the furnace shell (21) around the tuyere (32) to form an inner surface of the blast furnace.

IPC 8 full level
C21B 7/16 (2006.01); **C21B 7/10** (2006.01); **F27B 1/16** (2006.01); **F27B 1/24** (2006.01); **F27D 1/12** (2006.01); **F27D 9/00** (2006.01)

CPC (source: CN EP)
C21B 7/106 (2013.01 - EP); **C21B 7/163** (2013.01 - CN EP); **F27B 1/14** (2013.01 - EP); **F27B 1/16** (2013.01 - CN EP); **F27B 1/24** (2013.01 - EP); **F27D 1/045** (2013.01 - EP); **F27D 1/12** (2013.01 - EP); **F27D 2009/0002** (2013.01 - EP)

Citation (search report)
• [X1] GB 1288531 A 19720913
• [X1] CN 102206721 A 20111005 - CHINA 19TH METALLURG CORP
• [X1] WO 8806635 A1 19880907 - DAVY MCKEE STOCKTON [GB]
• [X1] US 3901539 A 19750826 - IJZERMAN EDUARD C
• See references of WO 2013168784A1

Cited by
LU102096B1; LU102097B1; WO2022063805A1; WO2022064022A1

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 2848705 A1 20150318; EP 2848705 A4 20160120; EP 2848705 B1 20190320; BR 112014028084 A2 20170627;
BR 112014028084 B1 20230124; BR 112014028084 B8 20230418; CN 104271774 A 20150107; JP 5702889 B2 20150415;
JP WO2013168784 A1 20160107; KR 101789558 B1 20171120; KR 20150009545 A 20150126; RU 2563069 C1 20150920;
WO 2013168784 A1 20131114

DOCDB simple family (application)
EP 13788617 A 20130510; BR 112014028084 A 20130510; CN 201380024254 A 20130510; JP 2013063139 W 20130510;
JP 2014514755 A 20130510; KR 20147031978 A 20130510; RU 2014150065 A 20130510