Title (en)

Tap hole measuring device for a bof vessel and method for measuring the thickness of a refractory lining in a tap hole of a bof vessel

Title (de)

Abstichlochmessvorrichtung für ein BOF-Gefäß und Verfahren zum Messen der Dicke einer refraktären Verkleidung in einem Abstichloch eines BOF-Gefäßes

Title (fr)

Dispositif de mesure d'un trou de coulée destiné à un convertisseur à oxygène et procédé pour mesurer l'épaisseur d'un revêtement réfractaire dans un trou de coulée d'un convertisseur à oxygène

Publication

EP 2827088 A1 20150121 (EN)

Application

EP 13176459 A 20130715

Priority

EP 13176459 A 20130715

Abstract (en)

The invention describes a tap hole measuring device for a BOF vessel used in steel production, the BOF vessel (1), comprising an internal refractory lining (3) and a tap hole (2), which includes an opening (5) and a flange (4) with a planar surface. The measuring device comprises a movable monitoring car (7), a steel rod (8) with a fan-shaped metal washer (9) mounted on one end of the rod (8), the other end of the rod (8) being fixed in a releasable manner in a tubular coupling sleeve (10) of the movable monitoring car (7) and a laser measuring device (11) placed in the vicinity and aligned parallel to the rod (8) on the movable monitoring car (7). The present invention is also related to a method for measuring the thickness of a refractory lining in a tap hole (2) of a BOF vessel (1) using the tap hole measuring device.

IPC 8 full level

F27D 21/00 (2006.01); **C21C 5/46** (2006.01)

CPC (source: EP)

C21C 5/4673 (2013.01); **F27D 21/0021** (2013.01); C21C 5/445 (2013.01)

Citation (search report)

[A] CN 202272911 U 20120613 - ANGANG STEEL CO LTD

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 2827088 A1 20150121

DOCDB simple family (application)

EP 13176459 A 20130715