

Title (en)
TUBULAR REFRACTORY PRODUCT

Publication
EP 0346378 B1 19930623 (EN)

Application
EP 88902156 A 19880229

Priority
GB 8704764 A 19870228

Abstract (en)
[origin: WO8806500A1] A refractory pouring-assembly component (1; 21; 31; 41) for use with a tube changer mechanism comprises an elongate tubular body having a throughbore (2; 22; 32; 42) for use with a tube changing mechanism to provide a replaceable means for pouring of molten metal during continuous casting from a tundish (19) into a mould wherein the refractory pouring component is an isostatically pressed, heat- and wear-resisting refractory one-piece composite body (1; 21; 31; 41) which is shaped to provide at one end a smooth, flat plate surface (3; 23; 33; 43) in which there is defined an aperture (4; 24; 34; 44), the peripheral edge (3'; 23'; 33'; 43') around said aperture being formed of a hard refractory material to provide an edge which during a tube changing operation is capable of cutting a skin or shell of solidified melt formed within the throughbore (2; 22; 32; 42) of the pouring assembly during pouring of molten metal therethrough, whilst the remainder of said body is formed to a tubular shape from a thermal shock-resistant material to provide for pouring of melt. The compositions of said component may be uniform blends of refractory material bonded by silicon nitride or silicon oxy-nitride or an annulus of selected hard materials within a graphite/alumina host body.

IPC 1-7
B22D 11/10; **B22D 41/08**

IPC 8 full level
B22D 11/10 (2006.01); **B22D 41/08** (2006.01); **B22D 41/28** (2006.01); **B22D 41/50** (2006.01)

CPC (source: EP)
B22D 41/28 (2013.01); **B22D 41/50** (2013.01)

Citation (examination)
Patent Abstracts of Japan, vol 5, nr 61(M-65)(733), 24 April 1981, & JP,A, 5614060 (KUROSAKI YOUNGIYOU K.K.) 10.02.1981

Cited by
WO2014042611A1; US5954989A; WO9841345A1; EP1149649B2

Designated contracting state (EPC)
AT BE CH DE FR IT LI LU NL SE

DOCDB simple family (publication)
WO 8806500 A1 19880907; AT E90896 T1 19930715; DE 3882041 D1 19930729; DE 3882041 T2 19931021; EP 0346378 A1 19891220; EP 0346378 B1 19930623; GB 2229662 A 19901003; GB 2229662 B 19910306; GB 8704764 D0 19870401; GB 8919031 D0 19891108

DOCDB simple family (application)
GB 8800139 W 19880229; AT 88902156 T 19880229; DE 3882041 T 19880229; EP 88902156 A 19880229; GB 8704764 A 19870228; GB 8919031 A 19890814