

Title (en)
Apparatus for and process of continuous casting

Title (de)
Vorrichtung und Verfahren zum Stranggiessen

Title (fr)
Dispositif et procédé pour la coulée continue

Publication
EP 0780176 A3 19990506 (EN)

Application
EP 96119789 A 19961210

Priority
• JP 32420395 A 19951213
• JP 8232496 A 19960404
• JP 12467296 A 19960520

Abstract (en)
[origin: EP0780176A2] A continuous casting apparatus of a reduction type in which a mold is composed of long-side mold elements (2) and short-side mold elements (1), each short-side mold element (1) including a reduction portion (7) widened at its upper portion and narrowed at its lower portion and a straight portion (8), so that reduction is performed in a state that solidification is suppressed on a short-side mold element (1) side. The reduction portion (7) is made of a refractory member, and the straight portion (8) is made of a water-cooled copper plate. The refractory member (7) may be made from a material mainly containing ZrB₂, and it may be divided in a plurality of parts. To control a temperature distribution of the short-side mold element (1), a high temperature supply passage (13) is provided in a back surface portion of the short-side mold element (1). An elastically deformable frame is arranged at a contact portion between a reduction portion (7) made of a refractory member and a long-side mold element (2) for preventing formation of gaps between the short-side mold element (1) and the long-side mold element (2). Also, a seal member is provided at a contact portion between the short-side mold element (1) and the long-side mold element (2) for improving a sliding therebetween.
<IMAGE> <IMAGE>

IPC 1-7
B22D 11/04; **B22D 11/06**; **B22D 11/10**; **B22D 11/16**

IPC 8 full level
B22D 11/04 (2006.01); **B22D 11/055** (2006.01); **B22D 11/059** (2006.01); **B22D 11/06** (2006.01)

CPC (source: EP KR)
B22D 11/0408 (2013.01 - EP); **B22D 11/053** (2013.01 - KR); **B22D 11/055** (2013.01 - EP); **B22D 11/059** (2013.01 - EP);
B22D 11/0605 (2013.01 - KR); **B22D 11/0622** (2013.01 - KR); **B22D 11/066** (2013.01 - EP); **B22D 11/0671** (2013.01 - EP);
B22D 11/108 (2013.01 - KR); **B22D 11/055** (2013.01 - KR); **B22D 11/16** (2013.01 - KR)

Citation (search report)
• [DAX] WO 9407628 A1 19940414 - DAVY MCKEE SHEFFIELD [GB]
• [X] EP 0363732 A1 19900418 - SCHLOEMANN SIEMAG AG [DE]
• [DA] PATENT ABSTRACTS OF JAPAN vol. 014, no. 407 (M - 1019) 4 September 1990 (1990-09-04)
• [DAX] PATENT ABSTRACTS OF JAPAN vol. 096, no. 002 29 February 1996 (1996-02-29)
• [A] PATENT ABSTRACTS OF JAPAN vol. 010, no. 153 (M - 484) 3 June 1986 (1986-06-03)

Cited by
CN110198795A; WO2005007320A1

Designated contracting state (EPC)
DE GB IT

DOCDB simple family (publication)
EP 0780176 A2 19970625; **EP 0780176 A3 19990506**; KR 970033248 A 19970722

DOCDB simple family (application)
EP 96119789 A 19961210; KR 19960063382 A 19961210