

Title (en)

Manipulator for introducing a casting pipe underneath a vessel containing a liquid metal.

Title (de)

Manipulator zum Heranführen eines Giessrohres unter einen Metallschmelze enthaltenden Behälter.

Title (fr)

Manipulation pour amener une busette de coulée sous un récipient contenant du métal liquide.

Publication

EP 0453732 B1 19950419 (DE)

Application

EP 91102871 A 19910227

Priority

CH 144290 A 19900427

Abstract (en)

[origin: EP0453732A1] A manipulator (20) for introducing a casting pipe (14) underneath a vessel (10) containing a liquid metal has a supporting frame (22), preferably displaceable on rails (23,28), and at least one connecting element (30,32), which runs in guide tracks (40',34) in the said frame, firmly holds the casting pipe (14) and by means of which the casting pipe can be moved as by a guide track from an approximately horizontal position into a vertical position underneath the vessel (10). The connecting element (30,32) can here be moved along the guide track (40') by a displacement element (40) provided in the supporting frame (22) and the casting pipe (14) is secured releaseably to it. Despite the limited space available, this manipulator (20) makes possible very accurate and simple introduction of a casting pipe into a mould (13) of a continuous casting plant. <IMAGE>

IPC 1-7

B22D 41/56

IPC 8 full level

B22D 11/10 (2006.01); **B22D 41/56** (2006.01)

CPC (source: EP KR)

B22D 11/10 (2013.01 - KR); **B22D 41/56** (2013.01 - EP KR)

Citation (examination)

61 172 660 (KAWASAKI HEAVY IND LTD) 4. August 1986

Cited by

CN110142156A; CN107626531A

Designated contracting state (EPC)

AT DE FR GB IT

DOCDB simple family (publication)

EP 0453732 A1 1991030; EP 0453732 B1 19950419; AT E121329 T1 19950515; CH 682642 A5 19931029; DE 59105220 D1 19950524; JP H04228258 A 19920818; KR 910018104 A 19911130

DOCDB simple family (application)

EP 91102871 A 19910227; AT 91102871 T 19910227; CH 144290 A 19900427; DE 59105220 T 19910227; JP 17907691 A 19910419; KR 910005686 A 19910410