

Title (en)
Immersion pipe

Title (de)
Tauchausguss

Title (fr)
Busette immmergée

Publication
EP 0822022 A3 20000216 (DE)

Application
EP 97250218 A 19970722

Priority
DE 19631566 A 19960729

Abstract (en)
[origin: EP0822022A2] The spout is intended for pouring liquid metal, in particular, steel from a vessel into a mould of a continuous casting installation. It consists of an approximately pipe-shaped top section and a bottom section with wide and narrow sides comprising: a) the bottom end of the top section (11) has a broadened zone (12) surrounding the top end of the bottom section (21); b) in the entry zone of the bottom section a seal (31) is located between the top and bottom sections; c) the bottom section is provided with a support (40) in its entry zone; d) fixing elements (50) engage with the support of the bottom section and join the latter to the top section.

IPC 1-7
B22D 41/50

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

CPC (source: EP KR US)
B22D 11/10 (2013.01 - KR); **B22D 41/50** (2013.01 - EP US); **B22D 41/502** (2013.01 - EP KR US)

Citation (search report)

- [AD] DE 4320723 A1 19950105 - DIDIER WERKE AG [DE]
- [DA] DE 4142447 A1 19921224 - MANNESMANN AG [DE]
- [DA] DE 3709188 A1 19880929 - MANNESMANN AG [DE]
- [A] US 3845943 A 19741105 - SHAPLAND J
- [A] US 3877675 A 19750415 - SHAPLAND JAMES T

Cited by
DE19819114C1; US6279915B1

Designated contracting state (EPC)
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

EP 0822022 A2 19980204; EP 0822022 A3 20000216; EP 0822022 B1 20020522; AT E217824 T1 20020615; AU 2866897 A 19980212;
AU 727845 B2 20010104; BR 9704133 A 19981222; CA 2211614 A1 19980129; CA 2211614 C 20020305; CN 1068262 C 20010711;
CN 1174107 A 19980225; DE 59707313 D1 20020627; DK 0822022 T3 20020617; ES 2173382 T3 20021016; JP 3011679 B2 20000221;
JP H1085912 A 19980407; KR 100299717 B1 20011122; KR 980008394 A 19980430; RU 2153952 C2 20000810; TR 199700707 A2 19980221;
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CN 97114782 A 19970728; DE 59707313 T 19970722; DK 97250218 T 19970722; ES 97250218 T 19970722; JP 21602997 A 19970725;
KR 19970035814 A 19970729; RU 97112636 A 19970728; TR 9700707 A 19970729; US 92562497 A 19970909; ZA 976391 A 19970718