

Title (en)
MOLTEN METAL DETECTION SENSOR

Publication
EP 0473295 A3 19920617 (EN)

Application
EP 91307046 A 19910731

Priority
JP 9181290 U 19900831

Abstract (en)
[origin: EP0473295A2] A molten metal detection sensor provided with hermetically sealing means for sealing an internal space of the sensor. The molten metal detection sensor includes a hollow holder (3) assembled in a metal mold, an electrode rod (1) extending through the holder (3) and an insulator (2) interposed between the electrode rod (1) and the holder (3) at one end portion of the holder (3) confronting a molten metal path. A rear open end of the holder (3) is attached with a lid member (15) for hermetically confining an internal space of the holder (3), and a filling material is filled in the internal space. One end portion of a lead wire (9) is connected to the electrode rod (1) for transmitting a molten metal detection signal to an external device. The lead wire extends through a wall of the holder (3) at a penetrating portion (14) where a tubular member (17a) is provided to surround the lead wire (9). The tubular member (17a) is engageable with the wall of the holder (3), and a top end of the tubular member is sealed by a sealing means (18). <IMAGE>

IPC 1-7
B22D 17/32

IPC 8 full level
G01F 23/24 (2006.01); **B22D 17/14** (2006.01); **B22D 17/20** (2006.01); **B22D 17/22** (2006.01); **B22D 17/32** (2006.01)

CPC (source: EP)
B22D 17/145 (2013.01); **B22D 17/32** (2013.01)

Citation (search report)
• [A] DE 2711112 A1 19780921 - GERDTS GUSTAV F KG
• [A] US 4804936 A 19890214 - SALE RONALD G S [CA]
• [AD] DE 3912006 A1 19891130 - RYOBI LTD [JP]
• [A] DE 3834777 A1 19890420 - RYOBI LTD [JP]

Cited by
CN104308118A

Designated contracting state (EPC)
DE GB IT

DOCDB simple family (publication)
EP 0473295 A2 19920304; **EP 0473295 A3 19920617**; **EP 0473295 B1 19950628**; DE 69110796 D1 19950803; DE 69110796 T2 19960321; JP H0447854 U 19920423; JP H0718463 Y2 19950501

DOCDB simple family (application)
EP 91307046 A 19910731; DE 69110796 T 19910731; JP 9181290 U 19900831