

Title (en)
PROCESS FOR MAKING CAST PIECES WITH INSERTED STEEL TUBES

Publication
EP 0071047 B1 19850529 (DE)

Application
EP 82106016 A 19820706

Priority
DE 3129391 A 19810725

Abstract (en)
[origin: US4832106A] The invention provides a method and a set-up for production of castings containing cast-in steel tubes, preferably to provide cooling elements for metallurgical furnaces. The castings are from cast steel and the steel tubes are cast-in with a superheated cast steel melt. Before the casting the tubes are filled with a granular, highly thermal conductive, refractory material. In order to assure that the cast-in steel or respectively cooling tubes remain free from leaks, the invention provides to employ as a filling material one or more of the materials: burned magnesite (sintered magnesite), corundum, sintered aluminum oxide, chromite, silicon carbide, silicon nitride.

IPC 1-7
B22D 19/00; **F27D 1/12**; **C21B 7/10**

IPC 8 full level
B22D 19/00 (2006.01); **C21B 7/10** (2006.01); **F27D 1/12** (2006.01); **F27D 9/00** (2006.01)

CPC (source: EP US)
B22D 19/0072 (2013.01 - EP US); **F27D 9/00** (2013.01 - EP US)

Citation (examination)
• DE 2719165 B1 19780706 - THYSSEN HUETTE AG
• DIDIER-WERKE AG, 1966, Wiesbaden (DE) "Feuerfest ABC" Seite 16, Stichwort "Chromit"

Cited by
CN103008615A; DE19647069A1; FR2558084A1; EP0443638A1; DE4102358A1; DE4102358C2; EP0190114A1; WO9515236A1

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

DOCDB simple family (publication)
US 4832106 A 19890523; AT E13497 T1 19850615; AU 554448 B2 19860821; AU 8554282 A 19830203; BR 8203636 A 19830614; CA 1196767 A 19851119; DD 207344 A1 19840229; DE 3129391 C1 19821104; DE 3263883 D1 19850704; EP 0071047 A2 19830209; EP 0071047 A3 19830615; EP 0071047 B1 19850529; ES 512334 A0 19830701; ES 521488 A0 19840116; ES 8307558 A1 19830701; ES 8402189 A1 19840116; JP S5865565 A 19830419; JP S6245019 B2 19870924; MX 159651 A 19890724; PL 139752 B1 19870228; PL 237599 A1 19830523; ZA 824950 B 19830427

DOCDB simple family (application)
US 40230082 A 19820727; AT 82106016 T 19820706; AU 8554282 A 19820702; BR 8203636 A 19820622; CA 408014 A 19820726; DD 24183882 A 19820721; DE 3129391 A 19810725; DE 3263883 T 19820706; EP 82106016 A 19820706; ES 512334 A 19820519; ES 521488 A 19830415; JP 12595182 A 19820721; MX 19247682 A 19820428; PL 23759982 A 19820721; ZA 824950 A 19820712