

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.

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CPC (source: EP US)

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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

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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

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