

Title (en)
PROCESS AND APPARATUS FOR CASTING HOLLOW STEEL INGOTS

Publication
EP 0092477 B1 19851106 (FR)

Application
EP 83400746 A 19830415

Priority
• FR 8206475 A 19820415
• FR 8304718 A 19830323

Abstract (en)
[origin: EP0092477A1] 1. Process for producing a hallow steel ingot (15), utilising in a conventional way an ingot mould (1) placed on a bottom-casting base (2) fed by at least one bottom outlet (5), and also involving, in the centre of the ingot mould (1), the installation of a vertical cylindrical core comprising an outer cylindrical sleeve (6) made of sheet metal and a hollow inner mandrel (8) which are separated from on another by a uniform gab (13), through which flows continuously a cooling stream consisting of a gas or a mist or of the mixture of a gas and a mist, descending along the axis of the hollow mandrel (8) and rising again along the sleeve (6) in the said uniform gab (13), the temperature of the steel, measured in a ladle just before it is poured into the ingot mould, being at most equal to 1,5908C, this process being characterised both in that the said vertical cylindrical core is completely metallic, in that the feed rate of liquid steel to the ingot mould (1) at each bottom outlet (5) is at most equal to 20 (twenty) cm/s, in that the rising speed of the steel in the ingot mould is at most equal to 14 (fourteen) cm/min, and in that the mandrel (8) can be removed intact after the ingot (15) has solidified, whilst the sleeve (6) remains adhering to the ingot (15) and not welded to the latter.

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B22D 7/04

IPC 8 full level
B22D 7/04 (2006.01)

CPC (source: EP KR)
B22D 7/00 (2013.01 - KR); **B22D 7/04** (2013.01 - EP)

Cited by
US6719034B2; EP0174157A3; GB2160132A; FR2676670A1; US4759399A; GB2193914A; GB2193914B; US2012064359A1; GB2269773B; GB2269773A; EP1447458A3; US5667191A; US5702628A; DE10063383C1; CZ298832B6; DE10043748B4; EP1216772A3; US10138544B2; US8349249B2; US8403980B2

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