

Title (en)
PROCESS AND APPARATUS FOR THE MANUFACTURING OF HOT-WORKING TOOLS

Publication
EP 0156760 A3 19870916 (DE)

Application
EP 85730029 A 19850227

Priority
DE 3409366 A 19840312

Abstract (en)
[origin: EP0156760A2] 1. A process for producing a hot-working tool, in which a molten metal of steel or special alloys based on Ni or Co is atomised by means of a gas and the particles of molten metal are collected in a mould, characterised in that in order to achieve a relative density in the tool of 70-90% the atomisation conditions (superheating of the molten metal, throughflow rate of the molten metal per unit of time, quantity of gas, gas velocity, gas temperature, removal of the mould from the atomisation nozzle) are set in such a manner that the particles of molten metal produced during atomisation have a pasty consistency when they hit the mould or the particles of molten metal already collected in the mould, that in addition hard substances are supplied to the atomisation nozzle during the atomisation process and that the tool is subjected to reaction annealing.

IPC 1-7
B22F 3/00; **B22F 9/08**; **B22D 23/00**

IPC 8 full level
B22F 1/00 (2006.01); **B22D 23/00** (2006.01); **B22F 3/00** (2006.01); **B22F 3/02** (2006.01); **B22F 3/035** (2006.01); **B22F 3/11** (2006.01); **B22F 3/115** (2006.01); **B22F 3/24** (2006.01); **B22F 5/00** (2006.01); **B22F 9/08** (2006.01); **C22C 1/10** (2006.01); **C23C 4/123** (2016.01)

CPC (source: EP)
B22D 23/003 (2013.01); **B22F 3/115** (2013.01); **C22C 1/1042** (2013.01); **C23C 4/123** (2016.01)

Citation (search report)
• [A] GB 1379261 A 19750102 - BROOKS R G
• [AD] DE 2537103 A1 19760304 - OSPREY METALS LTD
• [A] DE 1016539 B 19570926 - METALLGESELLSCHAFT AG

Cited by
DE3721258A1; EP0307556A3; EP0225732A1; EP0552004A1; DE3905873C1; EP0387237A3; EP0289116A1; FR2659581A1; EP0198607A1; EP0522438A1; US5143139A; GB2195662A; GB2195662B; EP0198606A1; EP0200349A1; WO8703012A1; WO8912115A1; WO8905870A1; US6258416B1; US6431464B2

Designated contracting state (EPC)
DE FR GB IT

DOCDB simple family (publication)
EP 0156760 A2 19851002; **EP 0156760 A3 19870916**; **EP 0156760 B1 19900627**; DE 3409366 A1 19850912; DE 3578391 D1 19900802; JP H0253481 B2 19901116; JP S60211001 A 19851023

DOCDB simple family (application)
EP 85730029 A 19850227; DE 3409366 A 19840312; DE 3578391 T 19850227; JP 4809785 A 19850311