

Title (en)

Heat insulating alloy steel and die casting machine parts

Title (de)

Wärmeisolierender legierter Stahl und Teile für eine Druckgiessmaschine

Title (fr)

Acier allié et isolante thermique, et pièces pour un dispositif de couler sous pression

Publication

EP 0798395 B1 20000712 (EN)

Application

EP 97302103 A 19970326

Priority

- JP 7388396 A 19960328
- JP 7388496 A 19960328

Abstract (en)

[origin: EP0798395A2] A heat insulating alloy steel contains 0.1 to 5.0 wt.% of C, 3.0 to 7.0 wt.% of Si, 5.0 to 18 wt.% of Ni, 0.5 to 8.0 wt.% of Cr, optionally at least one of less than 2.0 wt.% or less of Mn, 2.0 wt.% or less of Al and 2.0 wt.% of Mo, and the balance essentially of Fe. This heat insulating steel has a matrix metal structure with 30 % or more area ratio of a martensite phase. Further, a die casting machine part such as an injection sleeve or a pouring port bushing, having a surface making contact with an Al based molten metal, is made of a Fe base alloy containing 0.1 to 1.5 wt.% of C, 5.0 to 40 wt.% of Ni and 0.5 to 10 wt.% of at least one carbide forming element from: Cr, Mo, W, V, Nb, Ta, Ti and Zr. Such machine part comprises a surface layer portion including the surface making contact with the Al based molten metal, formed therein with a high density carbide layer as a dissolution resistance barrier. <IMAGE>

IPC 1-7

C22C 38/34; **B22D 17/22**

IPC 8 full level

B22D 17/20 (2006.01); **B22D 17/22** (2006.01); **C22C 38/40** (2006.01)

CPC (source: EP)

B22D 17/2023 (2013.01); **B22D 17/203** (2013.01); **B22D 17/2209** (2013.01); **C22C 38/40** (2013.01)

Cited by

EP1164002A3; US10124403B2; WO2017066882A1

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

EP 0798395 A2 19971001; **EP 0798395 A3 19971203**; **EP 0798395 B1 20000712**; DE 69702468 D1 20000817; DE 69702468 T2 20010308; KR 970065757 A 19971013

DOCDB simple family (application)

EP 97302103 A 19970326; DE 69702468 T 19970326; KR 19970010910 A 19970327