

Title (en)
Cast iron with niobium and component

Title (de)
Gusseisen mit Niob und Bauteil

Title (fr)
Fonte dotée de niobium et composant

Publication
EP 2712943 A3 20161109 (DE)

Application
EP 13181651 A 20130826

Priority
DE 102012217892 A 20121001

Abstract (en)
[origin: EP2712943A2] Iron-based alloy comprises silicon, carbon, niobium, molybdenum, cobalt, manganese, nickel, magnesium, phosphor, sulfur, chromium, antimony, and rest of iron. Iron-based alloy comprises 2-4.5 wt.% (preferably 2.3-3.9 wt.%) of silicon, 2.9-4 wt.% (preferably 3 wt.%) of carbon, 0.05-0.7 wt.% (preferably 0.1-0.7 wt.%) of niobium, 0.5-1.0 wt.% (preferably 0.5 wt.%) of molybdenum, 0.1-2.0 wt.% (preferably 0.1-1.0 wt.%) of cobalt, less than 0.3 wt.% (preferably 0.15-0.30 wt.%) of manganese, less than 0.5 wt.% (preferably 0.1 wt.%) of nickel, less than 0.07 wt.% (preferably 0.03-0.06 wt.%) of magnesium, less than 0.05 (preferably 0.02-0.035 wt.%) of phosphor, less than 0.012 wt.% (preferably 0.003 wt.% and 0.012 wt.%) of sulfur, less than 0.1 wt.% (preferably 0.01 wt.%) of chromium, less than 0.004 wt.% (preferably 0.003 wt.%) of antimony, and rest of iron.

IPC 8 full level
C22C 33/08 (2006.01); **C22C 37/04** (2006.01); **C22C 37/08** (2006.01); **C22C 37/10** (2006.01); **F01D 5/24** (2006.01); **F01D 5/28** (2006.01); **F01D 25/24** (2006.01)

CPC (source: EP RU US)
C22C 37/04 (2013.01 - EP US); **C22C 37/08** (2013.01 - EP US); **C22C 37/10** (2013.01 - EP RU US); **F01D 25/24** (2013.01 - EP US); **F05D 2300/111** (2013.01 - EP US)

Citation (search report)

- [L] EP 2511394 A1 20121017 - SIEMENS AG [DE], et al
- [XII] DE 102004040055 A1 20060302 - FEDERAL MOGUL BURSCEID GMBH [DE]
- [XII] WO 2006121826 A2 20061116 - WESCAST IND INC [CA], et al
- [XII] EP 1724370 A1 20061122 - HITACHI METALS LTD [JP]
- [XII] US 5236660 A 19930817 - REYNAUD ALAIN [FR], et al

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 2712943 A2 20140402; EP 2712943 A3 20161109; CN 103710614 A 20140409; DE 102012217892 A1 20140515; RU 2013143927 A 20150410; RU 2639194 C2 20171220; US 2014093416 A1 20140403

DOCDB simple family (application)
EP 13181651 A 20130826; CN 201310461826 A 20130930; DE 102012217892 A 20121001; RU 2013143927 A 20130930; US 201314033613 A 20130923