

Title (en)  
MARTENSITIC STEEL WITH Z-PHASE, POWDER AND COMPONENT MADE THEREOF

Title (de)  
MARTENSITISCHER STAHL MIT Z-PHASE, PULVER UND BAUTEIL

Title (fr)  
ACIER MARTENSITIQUE AVEC PHASE Z, POUDRE ET COMPOSANT COMPRENANT CELUI-CI

Publication  
**EP 3684957 B1 20231004 (DE)**

Application  
**EP 18759887 A 20180816**

Priority  
• DE 102017216461 A 20170918  
• EP 2018072190 W 20180816

Abstract (en)  
[origin: WO2019052766A1] The invention relates to an alloy which comprises at least the following (in % by weight): carbon (C): 0.15% - 0.25%; silicon (Si): 0.0% - 0.08%; manganese (Mn): 0.03% - 0.20%; chromium (Cr): 9.5% - 10.5%; molybdenum (Mo): 0.4% - 1.0%; tungsten (W): 1.6% - 2.4%; cobalt (Co): 2.5% - 3.5%; nickel (Ni): 0.0% - 0.40%; boron (B): 0.003% - 0.02%; nitrogen (N): 0.0% - 0.40%; titanium (Ti): 0.02% - 0.10%; vanadium (V): 0.10% - 0.30%; niobium (Nb): 0.02% - 0.08%; copper (Cu): 1.20% - 2.10%; and aluminum (Al): 0.003% - 0.06%, in particular 0.005% - 0.04%; the remainder being iron (Fe).

IPC 8 full level  
**C22C 38/00** (2006.01); **B22F 5/00** (2006.01); **C22C 33/02** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/20** (2006.01); **C22C 38/22** (2006.01); **C22C 38/24** (2006.01); **C22C 38/26** (2006.01); **C22C 38/28** (2006.01); **C22C 38/30** (2006.01); **C22C 38/32** (2006.01); **C22C 38/42** (2006.01); **C22C 38/44** (2006.01); **C22C 38/46** (2006.01); **C22C 38/48** (2006.01); **C22C 38/50** (2006.01); **C22C 38/52** (2006.01); **C22C 38/54** (2006.01); **B22F 3/17** (2006.01)

CPC (source: EP US)  
**B22F 5/009** (2013.01 - EP); **C21D 8/005** (2013.01 - US); **C22C 33/0285** (2013.01 - EP); **C22C 38/001** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/06** (2013.01 - EP US); **C22C 38/08** (2013.01 - US); **C22C 38/10** (2013.01 - US); **C22C 38/12** (2013.01 - US); **C22C 38/14** (2013.01 - US); **C22C 38/20** (2013.01 - EP US); **C22C 38/22** (2013.01 - EP); **C22C 38/24** (2013.01 - EP); **C22C 38/26** (2013.01 - EP); **C22C 38/28** (2013.01 - EP); **C22C 38/30** (2013.01 - EP); **C22C 38/32** (2013.01 - EP US); **C22C 38/42** (2013.01 - EP); **C22C 38/44** (2013.01 - EP); **C22C 38/46** (2013.01 - EP); **C22C 38/48** (2013.01 - EP); **C22C 38/50** (2013.01 - EP); **C22C 38/52** (2013.01 - EP); **C22C 38/54** (2013.01 - EP); **B22F 3/17** (2013.01 - EP); **C21D 2211/004** (2013.01 - EP); **C21D 2211/008** (2013.01 - EP US)

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

DOCDB simple family (publication)  
**WO 2019052766 A1 20190321**; CN 111133120 A 20200508; DE 102017216461 A1 20190321; EP 3684957 A1 20200729; EP 3684957 B1 20231004; US 11492686 B2 20221108; US 2020208245 A1 20200702

DOCDB simple family (application)  
**EP 2018072190 W 20180816**; CN 201880060012 A 20180816; DE 102017216461 A 20170918; EP 18759887 A 20180816; US 201816639765 A 20180816