

Title (en)

NIOBIUM AND CHROMIUM LOW ALLOY CARBON STEEL FOR HIGH WEAR RESISTANT AUTOMOTIVE CHAIN LINK PLATES

Title (de)

NIEDRIGLEGIERTER NIOB- UND CHROMKOHLENSTOFFSTAHL FÜR HOCHVERSCHLEISSFESTE KFZ-KETTENGLIEDPLATTEN

Title (fr)

ACIER AU CARBONE FAIBLEMENT ALLIÉ AU NIOBIUM ET AU CHROME POUR MAILLONS DE CHÂÎNE AUTOMOBILE RÉSISTANT À L'USURE

Publication

**EP 3455383 A4 20191120 (EN)**

Application

**EP 17796564 A 20170428**

Priority

- US 201662333950 P 20160510
- US 2017030000 W 20170428

Abstract (en)

[origin: WO2017196552A1] Niobium chromium low alloy carbon steel for automotive chain link plates has improved wear resistance. In one preferred embodiment, the steel composition includes niobium, chromium, carbon, iron, and any impurities. One preferred composition including these components includes, by weight percentage, approximately 0.25% to 0.75% carbon, approximately 0.20% to 2.0% chromium, approximately 0.26% to 1.5% niobium, and the remaining component of the composition is iron. Trace amounts of impurities may also be present. In another embodiment, a steel composition includes, by weight percentage, approximately 0.25% to 0.75% carbon, approximately 0.2% to 1.0% manganese, approximately 0.05% to 0.60% silicon, approximately 0.26% to 1.5% niobium, approximately 0.20% to 2.0% chromium, up to approximately 0.30% aluminum, up to approximately 0.03% phosphorus, up to approximately 0.03% sulfur, and a remainder of the composition being iron and any other impurities.

IPC 8 full level

**C22C 38/26** (2006.01); **C21D 1/20** (2006.01); **C21D 1/22** (2006.01); **C21D 1/25** (2006.01); **C21D 6/00** (2006.01); **C21D 9/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **F16G 15/12** (2006.01)

CPC (source: EP US)

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Citation (search report)

- [Y] WO 2015002775 A1 20150108 - BORGWARNER INC [US]
- [Y] EP 3015561 A1 20160504 - NISSHIN STEEL CO LTD [JP]
- [A] GB 2406891 A 20050413 - RENOLD PLC [GB]
- See references of WO 2017196552A1

Designated contracting state (EPC)

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