

Title (en)  
Alloy steel for sliding surfaces

Title (de)  
Stahllegierung für Gleitelemente

Title (fr)  
Acier allié pour surfaces de glissement

Publication  
**EP 0957181 A1 19991117 (DE)**

Application  
**EP 99103843 A 19990227**

Priority  
DE 19808276 A 19980227

Abstract (en)  
[origin: US6235237B1] A chromium steel alloy with 0.2 to 0.65% of carbon, 12.0 to 20.0% of chromium, 0.3 to 5.0% of molybdenum, 0.02 to 0.4% of nitrogen, up to 2% of manganese, up to 1.4% of silicon, up to 2% of nickel, up to 0.5% of copper, up to 0.2% of vanadium and/or niobium and up to 0.1% of aluminum, the remainder being iron including impurities resulting from smelting, is suitable as a material for gliding elements of sports equipment, in particular winter sports equipment.

Abstract (de)  
Eine Chrom-Stahllegierung mit 0,2 bis 0,65% Kohlenstoff, 12,0 bis 20,0% Chrom, 0,3 bis 5,0% Molybdän, 0,02 bis 0,4% Stickstoff, bis 2% Mangan, bis 1,4% Silizium, bis 2% Nickel, bis 0,5% Kupfer, bis 0,2% Vanadium und/oder Niob, bis 0,1% Aluminium, Rest Eisen einschließlich erschmelzungsbedingter Verunreinigungen eignet sich als Werkstoff für Gleitelemente von Sport-, insbesondere Wintersportgeräten.

IPC 1-7  
**C22C 38/22; C22C 38/00; A63C 5/048**

IPC 8 full level  
**C21D 1/25** (2006.01); **C21D 9/20** (2006.01); **C22C 38/22** (2006.01)

CPC (source: EP US)  
**C21D 1/25** (2013.01 - EP US); **C21D 9/20** (2013.01 - EP US); **C22C 38/22** (2013.01 - EP US)

Citation (search report)  
• [X] DE 1238676 B 19670413 - GEN ELECTRIC & US 3139337 A 19640630 - BOYLE CLARENCE J, et al  
• [X] US 4294613 A 19811013 - GIFLO HENRIK  
• [A] CH 369481 A 19630531 - BIRMINGHAM SMALL ARMS CO LTD [GB]  
• [A] PATENT ABSTRACTS OF JAPAN vol. 17, no. 205 (C - 1051) 22 April 1993 (1993-04-22)  
• [A] PATENT ABSTRACTS OF JAPAN vol. 17, no. 216 (C - 1053) 28 April 1993 (1993-04-28)

Designated contracting state (EPC)  
AT FR

DOCDB simple family (publication)  
**US 6235237 B1 20010522**; AT E217361 T1 20020515; DE 19808276 A1 19990909; DE 19808276 C2 20031224; EP 0957181 A1 19991117;  
EP 0957181 B1 20020508

DOCDB simple family (application)  
**US 25739599 A 19990225**; AT 99103843 T 19990227; DE 19808276 A 19980227; EP 99103843 A 19990227