

Title (en)

STEEL FOR MACHINE STRUCTURE EXCELLING IN MACHINABILITY AND STRENGTH PROPERTY

Title (de)

STAHL FÜR MASCHINENKONSTRUKTION MIT HERVORRAGENDER BEARBEITBARKEIT UND FESTIGKEIT

Title (fr)

ACIER POUR STRUCTURE MÉCANIQUE PRÉSENTANT UNE EXCELLENTE USINABILITÉ ET UNE EXCELLENTE PROPRIÉTÉ DE RÉSISTANCE

Publication

EP 2060647 A4 20160713 (EN)

Application

EP 07860545 A 20071225

Priority

- JP 2007075350 W 20071225
- JP 2006347928 A 20061225

Abstract (en)

[origin: EP2060647A1] The invention provides a machine structural steel excellent in machinability and strength properties that has good machinability over a broad range of machining speeds and also has high impact properties and high yield ratio, which machine structural steel comprises, in mass%, C: 0.1 to 0.85%, Si: 0.01 to 1.5%, Mn: 0.05 to 2.0%, P: 0.005 to 0.2%, S: 0.001 to 0.15%, total Al: greater than 0.05% and not greater than 0.3%, Sb: less than 0.0150% (including 0%), and total N: 0.0035 to 0.020%, solute N being limited to 0.0020% or less, and a balance of Fe and unavoidable impurities.

IPC 8 full level

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Citation (search report)

- [X] JP H0741851 A 19950210 - KAWASAKI STEEL CO
- [X] JP H07188847 A 19950725 - KAWASAKI STEEL CO
- [X] EP 1188846 A1 20020320 - KOBE STEEL LTD [JP] & JP 3706560 B2 20051012
- See references of WO 2008084749A1

Cited by

CN113913704A; EP2520682A4; EP2927340A1; EP3266899A3

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