

Title (en)
FREE-CUTTING STEEL AND METHOD FOR MANUFACTURING SAME

Title (de)
AUTOMATENSTAHL UND VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)
ACIER DE DÉCOLLETAGE ET PROCÉDÉ DE FABRICATION D'UN TEL ACIER

Publication
EP 4130303 A1 20230208 (EN)

Application
EP 21780703 A 20210331

Priority
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Abstract (en)
Provided is a free-cutting steel that, despite not containing Pb, has machinability by cutting higher than or equal to that of a low carbon sulfur-lead composite free-cutting steel. A free-cutting steel comprises: a chemical composition that contains, in mass%, C: less than 0.09 %, Mn: 0.50 % to 1.50 %, S: 0.250 % to 0.600 %, O: more than 0.010 % and 0.050 % or less, and Cr: 0.50 % to 1.50 %, with a balance consisting of Fe and inevitable impurities, and in which a A value defined by the following formula (1) is 6.0 to 18.0, and a steel microstructure in which at least 500 particles/mm² of sulfide of less than 1 μm in equivalent circle diameter and at least 2000 particles/mm² of sulfide of 1 μm to 5 μm in equivalent circle diameter are distributed.

IPC 8 full level
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