

Title (en)

Martensitic free cutting stainless steel

Title (de)

Martensitischer rostfreier Automatenstahl

Title (fr)

Acier de décolletage inoxydable martensitique

Publication

**EP 1918408 A2 20080507 (EN)**

Application

**EP 07019360 A 20071002**

Priority

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Abstract (en)

The present invention relates to a martensitic free cutting stainless steel, comprising, by weight percent: C: 0.10 to 1.20 %, Si: 0.10 to 2.00 %, Mn: 0.80 to 2.00 %, S: 0.10 to 0.30 %, Cr: 10.5 to 18.0 %, Pb: 0.03 to 0.30 %, Te: 0.01 to 0.10 %, B: 0.0005 to 0.010 %, and O: 0.005 to 0.030 %, with the remainder being substantially Fe and inevitable impurities; contents of P and N are: P: 0.005 to 0.10 %, and N:  $\leq 0.050$  %; wherein respective formulae of  $3.0 \leq [\text{Mn}]/[\text{S}] \leq 15.0$ ,  $0.10 \leq [\text{Te}]/[\text{S}]$ , and  $10 \leq [\text{S}]/[\text{O}] \leq 40$  are satisfied; and wherein a sulfide having a circle equivalent diameter of 2.0  $\mu\text{m}$  or more and an aspect ratio of 10 or less is present in a total amount of 0.50 to 10 % by area ratio.

IPC 8 full level

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