

Title (en)

FREE-CUTTING STAINLESS STEEL AND PROCESS FOR PRODUCING THE SAME

Title (de)

NICHTTROTENDER AUTOMATENSTAHL UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

ACIER INOXYDABLE DE DECOUPE LIBRE ET SON PROCÉDÉ DE FABRICATION

Publication

EP 2048257 B1 20140219 (EN)

Application

EP 07791987 A 20070730

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Abstract (en)

[origin: EP2048257A1] The present invention relates the free-cutting stainless steel that have not only of excellent machinability but also environment-friendliness and corrosion resistance and excellent mechanical property and methods of manufacturing free-cutting stainless steel. Free-cutting stainless steel produced by adding a free-cutting additive is characterized in that the free-cutting additive thereof is h-BN (hexagonal boron nitride) particles dispersed and precipitated homogeneously in the stainless steel. A method of manufacturing free-cutting stainless steel produced by adding a free-cutting additive is characterized in that free-cutting stainless steel where h-BN particles are precipitated is heated to dissolve the h-BN particles into steel matrix, quenched and subsequently tempered to disperse and precipitate h-BN particles homogeneously again as free-cutting additive or in that free-cutting stainless steel where h-BN particles are precipitated is heated to dissolve the h-BN particles into steel matrix and subsequently subjected to slow cooling to disperse and precipitate h-BN particles homogeneously again.

IPC 8 full level

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