

Title (en)
PRECIPITATION HARDENABLE AUSTENITIC STEEL

Title (de)
AUSSCHIEDUNGSHÄRTBARER AUSTENITISCHER STAHL

Title (fr)
ACIER AUSTENITIQUE DURCISSABLE PAR PRECIPITATION

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Application
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Abstract (en)
[origin: WO03056053A1] The present invention relates to a stainless steel alloy, more precisely a highstrength stainless, precipitation hardenable, austenitic, stainless alloy, containing a well adjusted amount of aluminium and a high silicon content and which has the following composition (in weight-%): C 0-0.07 Si 0.5-3.0 N 0-0.1 Cr 15.0-20.0 Ni 7.0-12.0 Al 0.25-1.5 Cu 0 <= Cu <= 4.0 Mn 0-3.0 Mo 0-2.0 Ti 0-1.0 and the balance Fe together with normally occurring impurities and additives and a product that is reduced by cold working, especially drawing, without intermediate heat treatment, the strength of which increases by final heat treatment at 300 °C to 500 °C by not less than 14 %, that shows a Md30-value of between -55 and -100, a loss of force that is smaller than 3.0 % at 1400 N during 24 h and which is very suitable for use in spring applications, such as springs of round wire and strip steel and in medical applications, such as surgical and dental instruments.

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