

Title (en)
HIGH SILICON STAINLESS STEEL, SPRING MANUFACTURED BY USING SAME AS RAW MATERIAL, AND METHOD FOR PRODUCING HIGH SILICON STAINLESS STEEL

Title (de)
SILICIUMREICHER NICHTROSTENDER STAHL, UNTER VERWENDUNG DIESES STAHL ALS AUSGANGSSTOFF HERGESTELLTE FEDER UND VERFAHREN ZUR HERSTELLUNG VON SILICIUMREICHEM NICHTROSTENDEM STAHL

Title (fr)
ACIER INOXYDABLE A FORTE TENEUR EN SILICIUM, RESSORT FABRIQUE EN UTILISANT CELUI-CI EN TANT QUE MATIERE PREMIERE, ET PROCEDE DE PRODUCTION DE L'ACIER INOXYDABLE A FORTE TENEUR EN SILICIUM

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Application
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Abstract (en)
[origin: EP1882755A1] There are provided a high silicon stainless steel with a high elongation at break, a spring made thereof, and a process for manufacturing the high silicon stainless steel. The high silicon stainless steel of the invention is characterized in : mainly comprising a microstructure with a grain size of 15 μm or less and having an elongation at break of 12% or higher; mainly comprising a microstructure with a grain size of 7 μm or less and having an elongation at break of 14 % or higher; or having an elongation at break of 7% or higher after thermal aging. The process of the invention for manufacturing the high silicon stainless steel is characterized in comprising a load application step for applying an impact load and/or a static load to the high silicon stainless steel or the master alloy, wherein the surface temperature is in a temperature range of 950 °C or below and not so low as to break the high silicon stainless steel or the master alloy. The high silicon stainless steel with a high elongation at break can provide a long-life spring.

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Citation (search report)

- [XA] JP H0463247 A 19920228 - NISSHIN STEEL CO LTD
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Citation (examination)
JP H0693388 A 19940405 - NIPPON KOKAN KK, et al

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