

## Title (en)

MARTENSITIC STAINLESS STEEL, PART MADE OF SAID STEEL AND METHOD FOR MANUFACTURING SAME

## Title (de)

MARTENSITISCHER ROSTFREIER STAHL, TEIL AUS DIESEM STAHL UND VERFAHREN ZUR HERSTELLUNG DAVON

## Title (fr)

ACIER INOXYDABLE MARTENSITIQUE, PIÈCE RÉALISÉE EN CET ACIER ET SON PROCÉDÉ DE FABRICATION

## Publication

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## Application

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## Abstract (en)

[origin: WO2015075262A1] The invention relates to martensitic stainless steel, characterised by having the following composition: traces  $\leq C \leq 0.030\%$ ; traces  $\leq Si \leq 0.25\%$ ; traces  $\leq Mn \leq 0.25\%$ ; traces  $\leq S \leq 0.020\%$ ; traces  $\leq P \leq 0.040\%$ ;  $8\% \leq Ni \leq 14\%$ ;  $8\% \leq Cr \leq 14\%$ ;  $1.5\% \leq Mo + W/2 \leq 3.0\%$ ;  $1.0\% \leq Al \leq 2.0\%$ ;  $0.5\% \leq Ti \leq 2.0\%$ ;  $2\% \leq Co \leq 9\%$ ; traces  $\leq N \leq 0.030\%$ ; traces  $\leq O \leq 0.020\%$ ; the balance being iron and production impurities; and in that the martensitic transformation starting temperature  $M_s$ , calculated by the formula (1)  $M_s (^{\circ}C) = 1302 - 28Si - 50Mn - 63Ni - 42Cr - 30Mo + 20Al - 12Co - 25Cu + 10[Ti - 4(C+N)]$ , in which the contents of the various elements are expressed in weight percentages, is no lower than  $50^{\circ}C$ , preferably no lower than  $75^{\circ}C$ . The invention also relates to a part made of said steel and to the method for manufacturing same.

## IPC 8 full level

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