

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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Priority

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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 Ms, calculated by the formula (1)  $M_s (^{\circ}\text{C}) = 1302 - 28\text{Si} - 50\text{Mn} - 63\text{Ni} - 42\text{Cr} - 30\text{Mo} + 20\text{Al} - 12\text{Co} - 25\text{Cu} + 10[\text{Ti} - 4(\text{C} + \text{N})]$ , in which the contents of the various elements are expressed in weight percentages, is no lower than 50  $^{\circ}\text{C}$ , preferably no lower than 75  $^{\circ}\text{C}$ . 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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