

Title (en)
PROCESS FOR MANUFACTURING HOT-ROLLED MARTENSITIC STAINLESS STEEL RODS OR ROD WIRE, AND PRODUCTS OBTAINED

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Application
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Abstract (en)
[origin: US4594115A] A process for the manufacture of martensitic stainless steel rods or machine wire, and the products thus obtained, by hot rolling, which steel comprises by % weight: C=0.015 to 0.090 N=0.015 to 0.080 with C+N=0.05 to 0.120 Cr=9.0 to 14.0 Nb= \leq 0.1 V= \leq 0.1 S= \leq 0.35 Si= \leq 1.0 Mn= \leq 1.0 Ni= \leq 2.0 Mo= \leq 1.0 P= \leq 0.040 Cu= \leq 1.0 Fe and impurities=balance and having the following mechanical properties: R=900 to 1100 MPa; E 0.2=650 to 850 MPa; A \geq 10%; and resilience KCU \geq 40 J/cm², and wherein the preheating or the end of the hot rough preliminary processing preceding the final hot rolling brings the products to a temperature between 1000 DEG C. and 1160 DEG , and wherein the final hot rolling which is effected at a temperature below or equal to 1150 DEG C. produces a section reduction "S/s" which is at least equal to 3, and which reduction is followed by homogenous cooling and when S \leq 0.08% the rods or machine wire have the following mechanical properties: R=900 to 1100 MPa; E 0.2=650 to 850 MPa; A=12 to 16%; resilience KCU=80 to 140 J/cm², and the rods or machine wire of the invention are particularly used for the manufacture of corrosion resistant mechanisms.

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CPC (source: EP US)
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