

Title (en)
LOW-COST AUSTENITIC STAINLESS STEEL HAVING HIGH STRENGTH AND HIGH FORMABILITY, AND METHOD FOR MANUFACTURING SAME

Title (de)
KOSTENGÜNSTIGER AUSTENITISCHER EDELSTAHL MIT HOHER FESTIGKEIT UND HOHER VERFORMBARKEIT UND VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)
ACIER AUSTÉNITIQUE INOXYDABLE PEU COÛTEUX PRÉSENTANT UNE RÉSISTANCE ÉLEVÉE ET UNE GRANDE APTITUDE AU FAÇONNAGE ET SON PROCÉDÉ DE FABRICATION

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Application
EP 21793437 A 20210202

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Abstract (en)
Disclosed are a low-cost austenitic stainless steel having high strength and high formability and a method for manufacturing same. The low-cost austenitic stainless steel having high strength and high formability according to an embodiment includes, greater than 0% and at most 0.08% of C, 0.2 to 0.25% of N, 0.8 to 1.5% of Si, 8.0 to 9.5% of Mn, 15.0 to 16.5% of Cr, greater than 0% and at most 1.0% of Ni, 0.8 to 1.8% of Cu, and the remainder of Fe and other unavoidable impurities and satisfies Expressions (1) to (4) below. (1) Ni +0.47Mn+15N ≥ 7.5 (2) 23(C+N)+1.3Si+0.24(Cr+Ni+Cu)+0.1Mn ≥ 12 (3) 551-462(C+N)-9.2Si-8.1Mn-13.7Cr-29(Ni+Cu) ≤ 70 (4) 11 ≤ 1+45C-5Si+0.09Mn+2.2Ni-0.28Cr-0.67Cu+88.6N ≤ 17 Here, C, N, Si, Mn, Cr, Ni, and Cu represent contents (wt%) of the elements, respectively.

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