

Title (en)
SUPER DUPLEX STAINLESS STEEL HAVING EXCELLENT YIELD STRENGTH AND IMPACT TOUGHNESS AND MANUFACTURING METHOD THEREFOR

Title (de)
SUPERDUPLXEDELSTAHL MIT HERVORRAGENDER STRECKGRENZE UND SCHLAGZÄHIGKEIT UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)
ACIER INOXYDABLE SUPER DUPLEX PRÉSENTANT UNE EXCELLENTE LIMITE D'ÉLASTICITÉ ET RÉSISTANCE AUX CHOCS ET SON PROCÉDÉ DE FABRICATION

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Application
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Abstract (en)
The present disclosure relates to super duplex stainless steel having excellent yield strength and impact toughness, wherein a reduction ratio and a heat treatment temperature are controlled so as to improve mechanical properties. The super duplex stainless steel having excellent yield strength and impact toughness according to one embodiment of the present disclosure is thick super duplex stainless steel having a thickness of 30 mm or greater, and includes, in weight%, Cr: 24% to 26%, Ni: 6.0% to 8.0%, Mo: 3.5% to 5.0%, N: 0.24% to 0.32%, and the remainder being Fe and inevitable impurities, wherein a microstructure includes a ferrite phase, an austenite phase and a secondary austenite phase, and grain size is 25 μm or less.

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