

Title (en)
DUPLEX STAINLESS STEEL

Title (de)
DUPLEXEDELSTAHL

Title (fr)
ACIER INOXYDABLE DUPLEX

Publication
EP 2677056 B1 20160518 (EN)

Application
EP 12747362 A 20120210

Priority
• JP 2011028334 A 20110214
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Abstract (en)
[origin: EP2677056A1] Provided is a duplex stainless steel that can suppress precipitation of a \tilde{A} phase at the time of high heat input welding, is excellent in SCC resistance under high-temperature chloride environments, and has a high strength. The duplex stainless steel according to the present invention includes a chemical composition containing, in mass percent, C: at most 0.030%, Si: 0.20 to 1.00%, Mn: at most 8.00%, P: at most 0.040%, S: at most 0.0100%, Cu: more than 2.00% and at most 4.00%, Ni: 4.00 to 8.00%, Cr: 20.0 to 28.0%, Mo: 0.50 to 2.00%, N: 0.100 to 0.350%, and sol. Al: at most 0.040%, the balance being Fe and impurities, and satisfying Expression (1) and Expression (2); a structure having a ferrite rate of at least 50%; and a yield strength of at least 550 MPa or more: $2.2 \# \text{¢ Cr} + 7 \# \text{¢ Mo} + 3 \# \text{¢ Cu} > 66 \text{ Cr} + 11 \# \text{¢ Mo} + 10 \# \text{¢ Ni} < 12 \# \text{¢ Cu} + 30 \# \text{¢ N}$

IPC 8 full level
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Cited by
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