

Title (en)

Use of a steel for chemical tank, excellent in sulfuric acid corrosion resistance and pitting corrosion resistance

Title (de)

Verwendung von Stahl für chemische Behälter mit hervorragendem Widerstand gegen Schwefelsäurekorrosion und Lochfrasskorrosion

Title (fr)

Utilisation d'un acier pour cuves chimiques avec excellente résistance à la corrosion par l'acide sulfurique et une résistance à la corrosion par piquûre

Publication

EP 1361290 B1 20060726 (EN)

Application

EP 03010309 A 20030507

Priority

JP 2002135883 A 20020510

Abstract (en)

[origin: EP1361290A1] The present invention provides a steel for a chemical tank, the steel suppressing the generation of corrosion damage by sulfuric acid and pitting corrosion by salt water, and is a steel for a chemical tank, the steel being excellent in sulfuric acid corrosion resistance and pitting corrosion resistance, characterized in that: the steel contains, by mass, C: 0.003 to 0.05%, Si: not more than 5%, Mn: not more than 2%, P: not more than 0.03%, S: not more than 0.010%, O: not more than 0.0050%, Cr: 18 to 25%, Ni: 10 to 20%, Mo: 1.0 to 4.5%, Cu: 1.0 to 3.0%, and N: 0.05 to 0.3%, with the balance consisting of Fe and unavoidable impurities; the GI value defined by the expression $GI = \text{Cr} + 1.6 \times \text{Ni} + 6.0 \times \text{Mo} + 7.1 \times \text{Cu}$ is in the range from 75 to 88, wherein the relevant components are expressed in terms of a mass percent; and the PI value defined by the expression $PI = \text{Cr} + 1.3 \times \text{Mo} + 1.4 \times \text{Cu} + 2.2 \times \text{N}$ is in the range from 23 to 32, wherein the relevant components are expressed in terms of mass percent. <IMAGE>

IPC 8 full level

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Cited by

EP2042616A4; US2011108120A1; US8728253B2; US8728243B2; WO2008108709A1

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