

Title (en)

Use of a weldable low-chromium ferritic cast steel, having excellent high-temperature strength

Title (de)

Verwendung eines schweisbaren ferritischen Gussstahls mit niedrigem Chromgehalt und mit sehr gute Warmfestigkeit

Title (fr)

Utilisation d'un acier de moulage ferritique soudable, à basse teneur en chrome et présentant une haute résistance mécanique aux températures élevées

Publication

**EP 0835946 B1 20011128 (EN)**

Application

**EP 97306432 A 19970822**

Priority

JP 26852996 A 19961009

Abstract (en)

[origin: EP0835946A1] This invention relates to low-Cr ferritic cast steels having excellent high-temperature strength, weldability, oxidation resistance and high-temperature corrosion resistance. These low-Cr ferritic cast steels consist essentially of, on a weight percentage basis, 0.03 to 0.12% C, 0.03 to 0.7% Si, 0.02 to 1% Mn, up to 0.3% Co, up to 0.025% P, up to 0.015% S, 0.8 to 3% Cr, 0.01 to 1% Ni, 0.01 to 0.5% V, 0.1 to 3% W, 0.01 to 0.2% Nb, 0.001 to 0.05% Al, 0.0001 to 0.02% B, 0.001 to 0.05% N, up to 0.03% O, 0.0005 to 0.05% Mg, and the balance being iron and incidental impurities, provided that the Mg content satisfies the following inequality as expressed on a weight percentage basis: 
$$Mg \leq 0.05 - 0.005 \times (C + Si + Mn + Co + P + S + Cr + Ni + V + W + Nb + Al + B + N + O + Mg)$$
 As a result, they exhibit excellent weldability and markedly improved high-temperature strength.

IPC 1-7

**C22C 38/54**; **C22C 38/46**

IPC 8 full level

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CPC (source: EP)

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Cited by

EP1979499A4; FR3014114A1; EP1038979A1; CN114480978A; US6254697B1; WO2007088555A1

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