

Title (en)

Weldable low-chromium ferritic cast steel, having excellent high-temperature strength

Title (de)

Schweisbares ferritisches Gussstahl mit niedrigem Chromgehalt und mit sehr gute Warmfestigkeit

Title (fr)

Acier de moulage ferritique soudable, à basse teneur en chrome et présentant une haute résistance mécanique aux températures élevées

Publication

EP 0835946 A1 19980415 (EN)

Application

EP 97306432 A 19970822

Priority

JP 26852996 A 19961009

Abstract (en)

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: $\text{Mg} \geq 0.0005 \times (\text{C} + \text{Si} + \text{Mn} + \text{Co} + \text{P} + \text{S} + \text{Cr} + \text{Ni} + \text{V} + \text{W} + \text{Nb} + \text{Al} + \text{B} + \text{N} + \text{O} + \text{Mg})$ 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)

C22C 38/46 (2013.01); **C22C 38/54** (2013.01)

Citation (search report)

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