Title (en)

Ferritic heat-resistant steel and method for producing it

Title (de)

Ferritischer,wärmebeständiger Stahl und Verfahren zur Herstellung

Title (fr)

Acier ferritique réfractaire et procédé de fabrication

Publication

EP 0903421 A1 19990324 (EN)

Application

EP 98307629 A 19980921

Priority

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- JP 25648197 A 19970922

Abstract (en)

The invention provides a ferritic heat-resistant steel having excellent high-temperature oxidation resistance, especially excellent steam oxidation-resistant characteristics. In high-Cr ferritic heat-resistant steel, ultra-fine oxide particles having a size of not larger than 1 mu m are formed just below the oxide films and formed on the steel base, whereby the adhesiveness between the films and the base is enhanced. The ferretic heat-resistant steel consists of: C from 0.02 to 0.18% Si up to 1.0%, Mn up to 1.5%, P up to 0.030%, S up to 0.015% Cr from 8.0 to 13.0% Mo up to 2%, W up to 4%, with W + 2Mo ≤4% V from 0.10 to 0.50%, Nb from 0.02 to 0.14% either Ti and/or Y, with 0.01 ≤Ti + Y ≤0.30% either Rh and/or Ir, with 0.3% ≤Rh + (1/2)Ir ≤5% either Pd and/or Pt in a total amount between 0.3 and 5% balance Fe

IPC 1-7

C22C 38/24; C22C 38/26; C22C 38/22

IPC 8 full level

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