Title (en)

HIGH-CHROMIUM AND HIGH-NICKEL ALLOY WITH HYDROGEN SULFIDE CORROSION RESISTANCE

Title (de)

NICKELLEGIERUNG MIT HOHEM CHROMGEHALT MIT HOHEM SCHWEFELWASSERSTOFFKORROSIONSWIDERSTAND

Title (fr)

ALLIAGE POSSEDANT UNE FORTE TENEUR EN CHROME ET EN NICKEL ET RESISTANT A LA CORROSION PAR SULFURE D'HYDROGENE

Publication

EP 0851037 A1 19980701 (EN)

Application

EP 96917716 A 19960617

Priority

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- JP 9601672 W 19960617

Abstract (en)

A high-Cr and high-Ni alloy of the invention comprises the following chemical composition and has excellent corrosion resistance to hydrogen sulfide in an environment where a partial pressure of hydrogen sulfide is about 1 atm., or below and the temperature is about 150 DEG C. The alloy is free of any expensive Mo and W and is thus inexpensive, with the attendant feature that mass production is possible: Si: 0.05 - 1.0%, Mn: 0.1 - 1.5%, Cr: 20 - 30%, Ni: 20 - 40%, sol. Al: 0.01 - 0.3%, Cu: 0.5 - 5.0%, REM: 0 - 0.10%, Y: 0 - 0.20%, Mg: 0 - 0.10%, Ca: 0 - 0.10%, and balance: Fe and incidental impurities, provided that C, P and S in the incidental impurity are, respectively, 0.05% or below, 0.03% or below and 0.01% or below. As set out above, each of REM, Y, Mg and Ca do not have to be added at all. If these elements are used, one or more of REM, Y, Mg and Ca are added. Preferable ranges of the contents of these elements when added are such that REM: 0.001 - 0.10%, Y: 0.001 - 0.20%, Mg: 0.001 - 0.10%, and Ca: 0.001 - 0.10%.

IPC 1-7

C22C 38/00; C22C 38/42; C22C 30/02

IPC 8 full level

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