

Title (en)

FERRITIC STAINLESS STEEL FOR EXHAUST GAS PASSAGE MEMBER

Title (de)

FERRITISCHER NICHTROSTENDER STAHL FÜR ABGASPASSAGENBAUELEMENT

Title (fr)

ACIER INOXYDABLE FERRITIQUE POUR UN ÉLÉMENT DE PASSAGE DE GAZ D'ÉCHAPPEMENT

Publication

**EP 2112245 B1 20150603 (EN)**

Application

**EP 08710877 A 20080131**

Priority

- JP 2008051981 W 20080131
- JP 2007024253 A 20070202

Abstract (en)

[origin: EP2112245A1] Provided is a stainless steel for exhaust gas path members, which has a composition including, in terms of % by mass, at most 0.03 % of C, at most 1 % of Si, at most 1.5 % of Mn, at most 0.6 % of Ni, from 10 to 20 % of Cr, from more than 0.5 to 0.7 % of Nb, from 0.05 to 0.3 % of Ti, from more than 1 to 2 % of Cu, at most 0.2 % of V, at most 0.03 % of N, from 0.0005 to 0.02 % of B, and optionally at most 0.1 % of Al, and further optionally at least one of Mo, W, Zr and Co in an amount of at most 4 % in total, with a balance of Fe and inevitable impurities, and which has a texture where the Cu phase and the Nb compound phase having a major diameter of at least 0.5  $\mu\text{m}$  are controlled to be in an amount of at most 10 grains/25  $\mu\text{m}^2$  each. The stainless steel exhibits excellent thermal fatigue resistance when applied to exhaust gas path members of both cases where the maximum ultimate temperature is high and low, and has excellent low-temperature toughness.

IPC 8 full level

**C22C 38/00** (2006.01); **C21D 6/00** (2006.01); **C21D 8/02** (2006.01); **C21D 9/46** (2006.01); **C22C 38/32** (2006.01); **C22C 38/54** (2006.01); **F01N 13/16** (2010.01)

CPC (source: EP KR US)

**C21D 6/002** (2013.01 - EP KR US); **C21D 8/0273** (2013.01 - EP US); **C21D 9/46** (2013.01 - EP KR US); **C22C 38/04** (2013.01 - KR); **C22C 38/18** (2013.01 - EP US); **C22C 38/20** (2013.01 - EP US); **C22C 38/24** (2013.01 - EP US); **C22C 38/26** (2013.01 - EP US); **C22C 38/28** (2013.01 - EP US); **C22C 38/42** (2013.01 - KR); **C22C 38/48** (2013.01 - KR); **C22C 38/50** (2013.01 - KR); **C22C 38/54** (2013.01 - KR); **F01N 13/16** (2013.01 - EP KR US)

Cited by

EP2602351A4; EP2628814A4; EP2980251A4; EP2557189A4; EP2966187A4; EP2824208A4; US10260134B2; US10385429B2; EP2864518A4; EP2546378A4; WO2013104357A1; US9885099B2; US10030282B2

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DOCDB simple family (application)

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