

Title (en)  
AUSTENITIC HEAT-RESISTANT ALLOY AND METHOD FOR PRODUCING SAME

Title (de)  
AUSTENITISCHE WÄRMEBESTÄNDIGE LEGIERUNG UND VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)  
ALLIAGE RÉSISTANT À LA CHALEUR À BASE D'AUSTÉNITE, ET PROCÉDÉ DE FABRICATION DE CELUI-CI

Publication  
**EP 3581669 A4 20200819 (EN)**

Application  
**EP 17895819 A 20170209**

Priority  
JP 2017004824 W 20170209

Abstract (en)  
[origin: EP3581669A1] Provided is an austenitic heat resistant alloy having a chemical composition consisting of, in mass %: C: 0.02 to 0.12%; Si: 2.0% or less; Mn: 3.0% or less; P: 0.030% or less; S: 0.015% or less; Cr: 20.0% or more and less than 28.0%; Ni: more than 35.0% and 55.0% or less; Co: 0 to 20.0%; W: 4.0 to 10.0%; Ti: 0.01 to 0.50%; Nb: 0.01 to 1.0%; Mo: less than 0.50%; Cu: less than 0.50%; Al: 0.30% or less; N: less than 0.10%; Mg: 0 to 0.05%; Ca: 0 to 0.05%; REM: 0 to 0.50%; V: 0 to 1.5%; B: 0 to 0.01%; Zr: 0 to 0.10%; Hf: 0 to 1.0%; Ta: 0 to 8.0%; Re: 0 to 8.0%; and the balance: Fe and impurities, wherein a shortest distance from a center portion to an outer surface portion of a cross section of the alloy is 40 mm or more, the cross section being perpendicular to a longitudinal direction of the alloy, an austenite grain size number at the outer surface portion is -2.0 to 4.0, an amount of Cr which is present as a precipitate satisfies  $[Cr_{PB}/Cr_{PS}] \leq 10.0$ , and  $[YS_{S}/YS_{B}] \leq 1.5$  and  $[TS_{S}/TS_{B}] \leq 1.2$  are satisfied at a room temperature.

IPC 8 full level  
**C22C 19/05** (2006.01); **C21D 8/00** (2006.01); **C22C 38/44** (2006.01); **C22C 38/48** (2006.01); **C22C 38/50** (2006.01); **C22C 38/58** (2006.01); **C22F 1/10** (2006.01)

CPC (source: EP KR US)  
**C21D 7/13** (2013.01 - KR); **C21D 8/005** (2013.01 - EP); **C21D 8/02** (2013.01 - KR); **C22C 19/05** (2013.01 - KR); **C22C 19/055** (2013.01 - EP); **C22C 30/02** (2013.01 - US); **C22C 38/44** (2013.01 - EP); **C22C 38/48** (2013.01 - EP); **C22C 38/50** (2013.01 - EP); **C22C 38/58** (2013.01 - EP KR); **C22F 1/10** (2013.01 - EP); **C22F 1/16** (2013.01 - US)

Citation (search report)  
• [X] EP 1357198 A1 20031029 - SUMITOMO METAL IND [JP]  
• [A] EP 2781612 A1 20140924 - NIPPON STEEL & SUMITOMO METAL CORP [JP]  
• [A] JP 2014012877 A 20140123 - NIPPON STEEL & SUMITOMO METAL CORP  
• [A] EP 2479300 A1 20120725 - SUMITOMO METAL IND [JP]  
• See references of WO 2018146783A1

Designated contracting state (EPC)  
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DOCDB simple family (publication)  
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