

Title (en)
AUSTENITIC STAINLESS STEEL

Title (de)
AUSTENITISCHER EDELSTAHL

Title (fr)
ACIER INOXYDABLE AUSTÉNITIQUE

Publication
EP 3480330 A1 20190508 (EN)

Application
EP 17820177 A 20170628

Priority
• JP 2016128321 A 20160629
• JP 2017023657 W 20170628

Abstract (en)
Provided is an austenitic stainless steel having excellent anti-carburizing properties even in a high temperature carburizing environment, and an excellent hot workability in its production. The austenitic stainless steel according to the present embodiment includes a chemical composition consisting of, in mass percent, C: 0.03 to less than 0.25%, Si: 0.01 to 2.0%, Mn: 2.0% or less, Cr: 10 to less than 22%, Ni: more than 30.0% to 40.0%, Al: more than 2.5% to less than 4.5%, Nb: 0.01 to 3.5%, Ca: 0.0005 to 0.05%, Mg: 0.0005 to 0.05%, and N: 0.03% or less, with the balance being Fe and impurities. In the austenitic stainless steel, a Cr concentration C_{Cr}' in its outer layer and an Al concentration C_{Al} ' in the outer layer satisfy Formula (1) for a Cr concentration C_{Cr} in an other-than-outer-layer region and an Al concentration C_{Al} in the other-than-outer-layer region.
$$0.40 \leq \frac{C_{Cr}}{C_{Al}} \leq 0.80$$

IPC 8 full level
C22C 38/00 (2006.01); **C21D 6/00** (2006.01); **C21D 8/00** (2006.01); **C21D 8/10** (2006.01); **C22C 38/58** (2006.01)

CPC (source: EP KR US)
C21D 6/00 (2013.01 - EP US); **C21D 6/004** (2013.01 - EP); **C21D 8/00** (2013.01 - EP US); **C21D 8/0236** (2013.01 - EP); **C21D 8/0268** (2013.01 - EP); **C21D 8/10** (2013.01 - EP US); **C21D 8/105** (2013.01 - EP); **C21D 9/08** (2013.01 - EP); **C21D 9/46** (2013.01 - EP); **C22C 30/02** (2013.01 - US); **C22C 38/00** (2013.01 - EP US); **C22C 38/001** (2013.01 - EP US); **C22C 38/002** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/06** (2013.01 - EP US); **C22C 38/34** (2013.01 - EP US); **C22C 38/42** (2013.01 - EP KR US); **C22C 38/44** (2013.01 - EP KR US); **C22C 38/46** (2013.01 - EP KR US); **C22C 38/48** (2013.01 - EP US); **C22C 38/50** (2013.01 - EP KR US); **C22C 38/54** (2013.01 - EP US); **C22C 38/58** (2013.01 - EP KR US); **C21D 8/105** (2013.01 - US); **C21D 2211/001** (2013.01 - EP KR US)

Cited by
SE2150122A1; SE543920C2

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