

Title (en)
HIGH-ALUMINUM AUSTENITIC ALLOY HAVING EXCELLENT HIGH-TEMPERATURE ANTICORROSION CAPABILITIES AND CREEP RESISTANCE

Title (de)
AUSTENITISCHE HOCHALUMINIUMLEGIERUNG MIT HERVORRAGENDEN HOCHTEMPERATUR-KORROSIONSSCHUTZEIGENSCHAFTEN UND KRIECHFESTIGKEIT

Title (fr)
ALLIAGE AUSTÉNITIQUE À HAUTE TENEUR EN ALUMINIUM PRÉSENTANT D'EXCELLENTE CAPACITÉS ANTICORROSION À HAUTE TEMPÉRATURE ET UNE EXCELLENTE RÉSISTANCE AU FLUAGE

Publication
EP 4276209 A1 20231115 (EN)

Application
EP 22736588 A 20220107

Priority
• CN 202110026450 A 20210108
• CN 2022070698 W 20220107

Abstract (en)
The present invention provides a high-aluminum austenitic alloy and a high-aluminum austenitic centrifugal casting pipe. The high-aluminum austenitic alloy and the high-aluminum austenitic centrifugal casting pipe have excellent anti-corrosion capabilities and creep resistance at a temperature of 900 °C or above, while having required mechanical properties. In weight percentage, the high-aluminum austenitic alloy or the high-aluminum austenitic centrifugal casting pipe of the present invention is composed of the elements of: C, 0.3-0.7%; Mn, 0-0.5%; Si, 0-0.5%; Cr, 20-26%; Ni, 40-50%; Al, 3.5-5%; Ti, 0.01-0.3%; Zr, 0.01-0.3%; Nb, 0.1-1%; Ta, 0.01-2%; Mo, 0.01-1%; W, 0.01-1.9%; N, 0.001-0.04%; Re, 0.03-0.3%; the remainder being Fe and inevitable impurities. The present invention also relates to a method for manufacturing the high-aluminum austenitic alloy and the high-aluminum austenitic centrifugal casting pipe of the present invention.

IPC 8 full level
C22C 19/05 (2006.01); **B22D 13/02** (2006.01); **C22C 1/02** (2006.01); **C22C 30/00** (2006.01)

CPC (source: CN EP US)
B22D 11/002 (2013.01 - US); **B22D 11/006** (2013.01 - US); **B22D 13/02** (2013.01 - CN EP); **B22D 21/04** (2013.01 - EP); **C22C 1/023** (2013.01 - CN); **C22C 19/055** (2013.01 - CN); **C22C 30/00** (2013.01 - CN); **C22C 38/001** (2013.01 - EP US); **C22C 38/005** (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 38/42** (2013.01 - EP); **C22C 38/44** (2013.01 - EP US); **C22C 38/46** (2013.01 - EP); **C22C 38/48** (2013.01 - EP US); **C22C 38/50** (2013.01 - EP US); **C22C 38/52** (2013.01 - EP); **C22C 38/54** (2013.01 - EP)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
EP 4276209 A1 20231115; CN 112853155 A 20210528; US 2024068079 A1 20240229; WO 2022148426 A1 20220714

DOCDB simple family (application)
EP 22736588 A 20220107; CN 202110026450 A 20210108; CN 2022070698 W 20220107; US 202218260857 A 20220107