

Title (en)
DUPLEX STAINLESS STEEL PIPE AND METHOD FOR MANUFACTURING SAME

Title (de)
DUPLEXEDELSTAHLROHR UND VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)
TUYAU EN ACIER INOXYDABLE DUPLEX ET SON PROCÉDÉ FABRICATION

Publication
EP 4282990 A1 20231129 (EN)

Application
EP 22770955 A 20220209

Priority
• JP 2021043498 A 20210317
• JP 2022005176 W 20220209

Abstract (en)
Provided herein is a duplex stainless steel pipe that is high in strength and has excellent abrasion resistance and indentation resistance on inner and outer surfaces of the steel pipe. A method for manufacturing such a stainless steel pipe is also provided. A duplex stainless steel pipe of the present invention has a composition that contains, in mass%, C: 0.005 to 0.150%, Si: 1.0% or less, Mn: 10.0% or less, Cr: 11.5 to 35.0%, Ni: 0.5 to 15.0%, Mo: 0.5 to 6.0%, N: less than 0.400%, and the balance being Fe and incidental impurities, and has a microstructure with a ferritic phase and an austenitic phase, the duplex stainless steel pipe having an axial tensile yield strength of 689 MPa or more, and having an outer surface and an inner surface each having an oxide layer having an average thickness of 1.0 μm or more.

IPC 8 full level
C21D 7/10 (2006.01); **C21D 9/08** (2006.01); **C22C 38/00** (2006.01); **C22C 38/58** (2006.01); **C22C 38/60** (2006.01)

CPC (source: EP US)
C21D 1/26 (2013.01 - EP); **C21D 6/004** (2013.01 - US); **C21D 6/005** (2013.01 - US); **C21D 6/008** (2013.01 - US); **C21D 7/10** (2013.01 - EP); **C21D 8/105** (2013.01 - EP US); **C21D 9/08** (2013.01 - EP); **C21D 9/14** (2013.01 - US); **C22C 38/001** (2013.01 - EP US); **C22C 38/002** (2013.01 - EP US); **C22C 38/004** (2013.01 - US); **C22C 38/005** (2013.01 - EP); **C22C 38/008** (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 US); **C22C 38/44** (2013.01 - EP US); **C22C 38/46** (2013.01 - US); **C22C 38/48** (2013.01 - EP US); **C22C 38/50** (2013.01 - EP US); **C22C 38/54** (2013.01 - EP US); **C22C 38/58** (2013.01 - EP US); **C22C 38/60** (2013.01 - EP US); **C21D 2211/001** (2013.01 - EP US); **C21D 2211/005** (2013.01 - EP US)

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 4282990 A1 20231129; AR 125543 A1 20230726; AU 2022240057 A1 20230817; BR 112023017868 A2 20231010; CA 3208799 A1 20220922; CN 116917523 A 20231020; JP 7173411 B1 20221116; JP WO2022196196 A1 20220922; MX 2023010534 A 20230919; US 2024309480 A1 20240919; WO 2022196196 A1 20220922

DOCDB simple family (application)
EP 22770955 A 20220209; AR P220100597 A 20220316; AU 2022240057 A 20220209; BR 112023017868 A 20220209; CA 3208799 A 20220209; CN 202280018568 A 20220209; JP 2022005176 W 20220209; JP 2022531457 A 20220209; MX 2023010534 A 20220209; US 202218279945 A 20220209