

Title (en)

ALUMINA FORMING BIMETALLIC TUBE FOR REFINERY PROCESS FURNACES AND METHOD OF MAKING AND USING

Title (de)

AUS ALUMINIUM GEFORMTES BIMETALLISCHES ROHR FÜR RAFFINERIEVERFAHRENSÖFEN SOWIE VERFAHREN ZU IHRER HERSTELLUNG UND VERWENDUNG

Title (fr)

TUBE BIMÉTALLIQUE FORMÉ À PARTIR D'UN ALLIAGE ALUMINOFORMEUR POUR FOURS DE RAFFINERIE ET PROCÉDÉ DE FABRICATION ET D'UTILISATION ASSOCIÉ

Publication

EP 2629903 A1 20130828 (EN)

Application

EP 11834922 A 20111017

Priority

- US 40542710 P 20101021
- US 201113271856 A 20111012
- US 2011056528 W 20111017

Abstract (en)

[origin: WO2012054377A1] Provided is a bimetallic tube for transport of hydrocarbon feedstocks in refinery process furnaces, and more particularly in furnace radiant coils, including: i) an outer tube layer being formed from carbon steels or low chromium steels comprising less than 15.0 wt.% Cr based on the total weight of the steel; ii) an inner tube layer being formed from- an alumina forming bulk alloy including 5.0 to 10.0 wt.% of Al, 20.0 wt.% to 25.0 wt.% Cr, less than 0.4 wt.% Si, and at least 35.0 wt.% Fe with the balance being Ni, wherein the inner tube layer is formed plasma powder welding the alumina forming bulk alloy on the inner surface of the outer tube layer; and iii) an oxide layer formed on the surface of the inner tube layer.

IPC 8 full level

B21D 39/00 (2006.01)

CPC (source: EP KR)

B23K 10/02 (2013.01 - KR); **B23K 10/027** (2013.01 - EP); **C10G 9/203** (2013.01 - EP); **C10G 75/00** (2013.01 - EP); **C22C 19/05** (2013.01 - KR); **C22C 38/18** (2013.01 - KR); **F16L 9/02** (2013.01 - EP); **F16L 9/04** (2013.01 - KR); **B23K 2103/20** (2018.07 - EP)

Citation (search report)

See references of WO 2012054377A1

Cited by

US8877342B2; WO2013155367A1

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

DOCDB simple family (publication)

WO 2012054377 A1 20120426; BR 112013009481 A2 20160726; CA 2815357 A1 20120426; CN 103282137 A 20130904; EP 2629903 A1 20130828; JP 2014501620 A 20140123; KR 20130138805 A 20131219

DOCDB simple family (application)

US 2011056528 W 20111017; BR 112013009481 A 20111017; CA 2815357 A 20111017; CN 201180061501 A 20111017; EP 11834922 A 20111017; JP 2013534985 A 20111017; KR 20137012848 A 20111017