

Title (en)

METHOD AND APPARATUS FOR MANIPULATING EQUIPMENT INSIDE A STEAM GENERATOR

Title (de)

VERFAHREN UND VORRICHTUNG ZUR MANIPULATION EINER AUSRÜSTUNG IM INNERN EINES DAMPFGENERATORS

Title (fr)

PROCÉDÉ ET APPAREIL PERMETTANT DE MANIPULER UN ÉQUIPEMENT À L'INTÉRIEUR D'UN GÉNÉRATEUR DE VAPEUR

Publication

EP 3172736 B1 20191218 (EN)

Application

EP 14898160 A 20140818

Priority

- US 201414338368 A 20140723
- US 2014051463 W 20140818

Abstract (en)

[origin: WO2016014095A1] A method and apparatus for manipulating a tool within the secondary side of a steam generator having a tube sheet with a tube bundle having a plurality of heat exchange tubes extending from the tube sheet in rows with an annulus extending around the heat exchange tubes on a periphery of the tube bundle, between the tubes and a wrapper which surrounds the tube bundle. A robot is introduced into the annulus and extends a probe with a tool across selected lanes between the rows of tubes. A method and apparatus is also disclosed for cleaning sludge from the top of a tube sheet that includes introducing a moveable suction apparatus having attached vacuum inlets into either the no tube lane or the circumferential annulus and sludge vacuuming the top of the tube sheet.

IPC 8 full level

G21C 19/20 (2006.01); **F22B 37/00** (2006.01); **F22B 37/48** (2006.01)

CPC (source: EP KR)

F22B 37/003 (2013.01 - EP KR); **F22B 37/005** (2013.01 - EP); **F22B 37/483** (2013.01 - EP KR); **F22B 37/486** (2013.01 - EP)

Cited by

WO2020126370A1

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 2016014095 A1 20160128; CN 106575529 A 20170419; CN 106575529 B 20181102; EP 3172736 A1 20170531; EP 3172736 A4 20180718; EP 3172736 B1 20191218; ES 2770729 T3 20200702; JP 2017530323 A 20171012; JP 6482155 B2 20190313; KR 102295940 B1 20210830; KR 20170039203 A 20170410

DOCDB simple family (application)

US 2014051463 W 20140818; CN 201480080867 A 20140818; EP 14898160 A 20140818; ES 14898160 T 20140818; JP 2017500367 A 20140818; KR 20177004837 A 20140818