

Title (en)
HEATING ELEMENT AND PROCESS HEATER

Title (de)
HEIZELEMENT UND PROZESSHEIZER

Title (fr)
ÉLÉMENT CHAUFFANT ET DISPOSITIF DE CHAUFFAGE DE PROCESSUS

Publication
EP 2926623 A1 20151007 (DE)

Application
EP 15705240 A 20150210

Priority
• DE 102014102474 A 20140225
• EP 2015052712 W 20150210

Abstract (en)
[origin: CA2936372A1] Heating element for heating gases to high temperatures, comprising at least one tube (1) arranged for the flow of gas to be heated and an electrical heating wire in the tube, which is designed for the transfer of heat to the gas flowing past the heating wire. A process heater and a corresponding heating element are provided, which permit a generation of gas temperatures up to 1000 °C or above and nevertheless have a relatively long life, which usually is at least 10 times as long as the life span of conventional heating coils when generating gas temperatures up to 1000 °C. According to the invention, it is proposed that the heating wire is formed as a heating rod (2) extending along the tube axis, whose maximum clear distance to the inner wall of the tube does not exceed a value of 10 mm over at least 80% of the circumference and/or at least 80% of the overlapping length of the tube and the heating rod.

IPC 8 full level
H05B 3/48 (2006.01); **F24H 3/00** (2006.01)

CPC (source: EP KR RU US)
F24H 3/002 (2013.01 - EP KR US); **H05B 3/44** (2013.01 - US); **H05B 3/48** (2013.01 - EP KR RU US); **H05B 2203/003** (2013.01 - EP KR US); **H05B 2203/014** (2013.01 - EP KR US); **H05B 2203/022** (2013.01 - US)

Cited by
WO2020193479A1; CN113631871A; DE102017120814A1; WO2019048236A1; EP3873173A1; WO2021170260A1; WO2019110798A1; US11692738B2; WO2019110799A1; US12000622B2

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

DOCDB simple family (publication)
DE 102014102474 A1 20150827; CA 2936372 A1 20150902; CA 2936372 C 20180320; CN 105874878 A 20160817; CN 105874878 B 20180227; CN 108489087 A 20180904; DK 2926623 T3 20160926; DK 2926623 T4 20190701; EP 2926623 A1 20151007; EP 2926623 B1 20160615; EP 2926623 B2 20190501; ES 2586472 T3 20161014; ES 2586472 T5 20191127; JP 2017510021 A 20170406; JP 2018041722 A 20180315; JP 6194115 B2 20170906; KR 101735817 B1 20170515; KR 20160085921 A 20160718; KR 20170054576 A 20170517; PL 2926623 T3 20170831; PL 2926623 T5 20190930; RU 2016123605 A 201711220; RU 2669589 C1 20181012; US 2017094725 A1 20170330; US 2018098385 A1 20180405; US 9867232 B2 20180109; WO 2015128183 A1 20150903

DOCDB simple family (application)
DE 102014102474 A 20140225; CA 2936372 A 20150210; CN 201580003492 A 20150210; CN 201810062814 A 20150210; DK 15705240 T 20150210; EP 15705240 A 20150210; EP 2015052712 W 20150210; ES 15705240 T 20150210; JP 2016533061 A 20150210; JP 2017154413 A 20170809; KR 20167018289 A 20150210; KR 20177012509 A 20150210; PL 15705240 T 20150210; RU 2016123605 A 20150210; US 201515035678 A 20150210; US 201715831957 A 20171205