

Title (en)

TUBE FURNACE AND CHEMICAL CONVERSION METHOD

Title (de)

ROHROFEN UND VERFAHREN ZUR CHEMISCHEN UMSETZUNG

Title (fr)

FOUR À TUBE ET PROCÉDÉ SERVANT À LA TRANSFORMATION CHIMIQUE

Publication

**EP 3303960 A1 20180411 (DE)**

Application

**EP 16731519 A 20160527**

Priority

- DE 102015209742 A 20150527
- EP 2016062014 W 20160527

Abstract (en)

[origin: WO2016189138A1] The invention relates to a tube furnace (1) comprising a housing (10) which contains a heat exchanger that has a wall, said wall separating a first volume from a second volume. One volume (21, 22) is designed to receive at least one reactant, and the other volume (22, 21) is designed to receive a heat transfer fluid, said heat transfer fluid containing or consisting of a sphere fluid. The tube furnace further contains a recuperator (3) in which the sphere fluid can be brought into contact with a gaseous heat transfer medium. The invention further relates to a method for chemically converting reactants in a second volume (22), wherein heat is added to or discharged from the second volume (22) by means of at least one heat transfer fluid flowing through a heat exchanger, and the heat transfer fluid contains or consists of a sphere fluid and an additional gaseous heat transfer medium.

IPC 8 full level

**F27B 7/10** (2006.01); **F27B 7/04** (2006.01); **F28F 5/06** (2006.01)

CPC (source: EP)

**F27B 7/10** (2013.01); **F28F 5/06** (2013.01); **F27B 2007/048** (2013.01); **F28D 2021/0057** (2013.01)

Citation (search report)

See references of WO 2016189138A1

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 102015209742 A1 20161201**; **DE 102015209742 B4 20170921**; EP 3303960 A1 20180411; EP 3303960 B1 20191127; ES 2769725 T3 20200629; PL 3303960 T3 20200430; WO 2016189138 A1 20161201

DOCDB simple family (application)

**DE 102015209742 A 20150527**; EP 16731519 A 20160527; EP 2016062014 W 20160527; ES 16731519 T 20160527; PL 16731519 T 20160527