

Title (en)  
TUBE BUNDLE REACTOR FOR PRODUCING MALEIC ACID ANHYDRIDE

Title (de)  
ROHRBÜNDELREAKTOR ZUR HERSTELLUNG VON MALEINSÄUREANHYDRID

Title (fr)  
RÉACTEUR À FAISCEAU DE TUBES POUR LA PRÉPARATION D'ANHYDRIDE D'ACIDE MALÉIQUE

Publication  
**EP 2498904 A2 20120919 (DE)**

Application  
**EP 10771481 A 20101102**

Priority  
• EP 09175466 A 20091110  
• EP 2010066597 W 20101102  
• EP 10771481 A 20101102

Abstract (en)  
[origin: US2011110830A1] An apparatus for preparing maleic anhydride by heterogeneously catalyzed gas-phase oxidation of a feed stream comprising hydrocarbons having at least 4 carbon atoms per molecule, which comprises a reactor having a bundle of reaction tubes into which a solid-state catalyst over which the exothermic reaction of the feed stream with an oxygen-comprising gas stream takes place has been introduced and also one or more pumps and one or more heat exchangers which are located outside the reactor and through which a heat transfer medium formed by a salt melt flows through the intermediate space in the reactor between the reaction tubes and takes up the heat of reaction, with the temperature of the salt melt being in the range from 350 to 480° C., wherein the reaction tubes are made of a heat-resistant alloy steel which comprises either at least 0.5% by weight of chromium or at least 0.25% by weight of molybdenum or at least 0.5% by weight of chromium and at least 0.25% by weight of molybdenum, is proposed.

IPC 8 full level  
**B01J 19/00** (2006.01)

CPC (source: EP US)  
**B01J 8/067** (2013.01 - EP US); **B01J 19/02** (2013.01 - EP US); **C07C 51/215** (2013.01 - EP US); **B01J 2219/00245** (2013.01 - EP US); **B01J 2219/0286** (2013.01 - EP US)

C-Set (source: EP US)  
**C07C 51/215** + **C07C 57/145**

Citation (search report)  
See references of WO 2011057911A2

Citation (examination)  
EURO INOX: "Stainless Steel: Tables of Technical Properties", MATERIALS AND APPLICATIONS SERIES, VOLUME 5, 1 January 2007 (2007-01-01), XP055015829, ISBN: 978-2-87-997242-8, Retrieved from the Internet <URL:http://www.euro-inox.org/pdf/map/Tables\_TechnicalProperties\_EN.pdf> [retrieved on 20120106]

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DOCDB simple family (application)  
**US 94271510 A 20101109**; CN 201080050612 A 20101102; EP 10771481 A 20101102; EP 2010066597 W 20101102; RU 2012123724 A 20101102; TW 99138742 A 20101110