Title (en)
HEAT EXCHANGE REFORMER UNIT AND REFORMER SYSTEM

Title (de)
WÄRMEAUSTAUSCHREFORMEREINHEIT UND REFORMERSYSTEM

Title (fr)
UNITE DE REFORMAGE D'UN ECHANGEUR DE CHALEUR ET SYSTEME DE REFORMAGE

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Application
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Abstract (en)
[origin: WO2007122497A2] In a heat exchange reformer unit 10, a reforming passage 18 in which reforming catalyst 22 for inducing reforming reactions is supported, and a combustion passage 20 in which oxidizing catalyst 24 for combustion is supported, are disposed adjacent to each other with a plate portion 52 interposed therebetween. Heat-exchanging passages 58A of the reforming passage 18 that produces reformate gas that contains hydrogen from supplied reformation material, and heat-exchanging passages 64A of the combustion passage 20 that supplies heat, which is generated by catalytically burning supplied fuel, to the reforming passage 18 constitute a parallel-flow heat exchanger. Gas flow directions in the heat-exchanging passages 58A and 64A are both the direction indicated by the arrow F, Reformation material guide passages 58B for introducing reformation material into the heat-exchanging passages 58A in a predetermined direction, and mixed gas guide passages 64B for introducing fuel into the heat-exchanging passages 64A in a direction intersecting the gas flow direction in the reformation material guide passages 58B are provided upstream of the heat-exchanging passages 58A and 64A in the gas flow direction. A plurality of layers of the reforming passages 18 and a plurality of layers of the combustion passages 20 are stacked with the number of layers of the reforming passages 18 greater than the number of layers of the combustion passages 20.

IPC 8 full level
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