

Title (en)
METHOD FOR OPERATING A REACTOR MODULE FOR ENDOTHERMIC REACTIONS AND REACTOR HAVING A PLURALITY OF SUCH REACTOR MODULES

Title (de)
VERFAHREN ZUM BETREIBEN EINES REAKTORMODUL FÜR ENDOTHERME REAKTIONEN SOWIE REAKTOR MIT EINER MEHRZAHL VON SOLCHEN REAKTORMODULEN

Title (fr)
PROCÉDÉ POUR FAIRE FONCTIONNER UN MODULE DE RÉACTEUR POUR RÉACTIONS ENDOTHERMIQUES ET RÉACTEUR POURVU DE PLUSIEURS MODULES DE CE TYPE

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Application
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Abstract (en)
[origin: WO2011023177A1] The invention relates to a reactor module for endothermic reactions for producing one or more products, a reactor having a plurality of such reactor modules, and a method for operating a reactor module or a reactor. The reactor module comprises a reaction channel (2; 31; 71), which is enclosed by a tubular boundary wall (2a; 31a; 75, 76) and has a first end (3; 32; 72) and a second end (4; 33; 73), at least one first inlet element (3; 35; 72) for introducing at least one reactant into the reaction channel (2; 31; 71), wherein the first inlet element (3; 35; 72) is arranged at the first end (3; 32; 72) of the reaction channel (2; 31; 71), at least one first outlet element (4; 37; 73) for discharging at least one reaction product from the reaction channel (2; 31; 71), wherein the first outlet element (4; 37; 73) is arranged at the second end (4; 33; 73) of the reaction channel (2; 31; 71), and a heat supply device in the form of a porous burner arrangement (10; 50; 60; 80), which is arranged on the outside of the tubular boundary wall (2a; 31a; 75, 76) of the reaction channel (2; 31; 71). Because a porous burner arrangement is used instead of a heat source having catalytic combustion, high reactor performance can be realized at an economically reasonable price. This is a result of the porous burner itself being substantially less expensive than a combustion catalyst.

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