

Title (en)

APPARATUS COMPRISING A REACTOR FOR DEHYDROGENATING A HYDROGEN-ENRICHED LIQUID HYDROGEN CARRIER

Title (de)

VORRICHTUNG MIT EINEM REAKTOR ZUM DEHYDRIEREN EINES MIT WASSERSTOFF ANGEREICHERTEN FLÜSSIGEN WASSERSTOFFTRÄGERS

Title (fr)

APPAREIL DOTÉ D'UN RÉACTEUR DESTINÉ À DÉSHYDROGÉNER UN TRANSPORTEUR D'HYDROGÈNE LIQUIDE ENRICHI EN HYDROGÈNE

Publication

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Application

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Priority

EP 2020054468 W 20200220

Abstract (en)

[origin: WO2021164874A1] What is described is an apparatus comprising a reactor for dehydrogenating a hydrogen-enriched liquid hydrogen carrier, wherein the reactor comprises at least one hydrogen carrier inlet for the entry of the hydrogen-enriched liquid hydrogen carrier, at least one reactor chamber for at least partial separation of gaseous hydrogen from the hydrogen carrier and for conversion of the hydrogen carrier into an at least partially dehydrogenated state, at least one hydrogen carrier outlet for release of the hydrogen carrier in an at least partially dehydrogenated state, at least one hydrogen outlet for release of the hydrogen separated from the hydrogen carrier, at least one first plate-shaped element and at least one second plate-shaped element, wherein at least a section of the at least one reactor chamber is disposed between the first plate-shaped element and the second plate-shaped element. The invention has this special feature that the at least one first plate-shaped element includes at least one arrangement of a first section and of a second section spaced apart from the first section in a direction transverse to a plane substantially defined by the first plate-shaped element, and the first section of the first plate-shaped element is joined with sealing to the at least one second plate-shaped element so that a first section of the reaction chamber is formed between the second section of the first plate-shaped element and the second plate-shaped element.

IPC 8 full level

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See references of WO 2021164874A1

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