

Title (en)  
APPARATUS AND PROCESS FOR THE PRODUCTION OF HYDROGEN

Title (de)  
VORRICHTUNG UND VERFAHREN ZUR HERSTELLUNG VON WASSERSTOFF

Title (fr)  
APPAREIL ET PROCEDE DE PRODUCTION D'HYDROGENE

Publication  
**EP 1365990 A2 20031203 (EN)**

Application  
**EP 02718175 A 20020304**

Priority

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- US 27335401 P 20010305
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Abstract (en)  
[origin: WO02070402A2] Disclosed is a new process and apparatus for steam reforming of any vaporizable hydrocarbon to produce H<sub>2</sub> and CO<sub>2</sub>, with minimal CO, and no CO in the H<sub>2</sub> stream, using a membrane steam reforming (MSR) reactor and flame-less distributed combustion (FDC) which provides great improvements in heat exchange efficiency and load following capabilities to drive the steam reforming reaction. The invention also pertains to a zero emission hybrid power system wherein the produced hydrogen is used to power a high-pressure internally manifolded molten carbonate fuel cell. In addition, the design of the FDC-MSR powered fuel cell makes it possible to capture good concentrations of CO<sub>2</sub> for sequestration or use in other processes.

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IPC 8 full level  
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