

Title (en)  
SYSTEM AND METHOD FOR HYDROGEN PRODUCTION AND STORAGE

Title (de)  
SYSTEM UND VERFAHREN ZUR HERSTELLUNG UND LAGERUNG VON WASSERSTOFF

Title (fr)  
SYSTÈME ET PROCÉDÉ DE PRODUCTION ET DE STOCKAGE D'HYDROGÈNE

Publication  
**EP 4177378 A1 20230510 (EN)**

Application  
**EP 21206730 A 20211105**

Priority  
EP 21206730 A 20211105

Abstract (en)  
A system (100) and method (500) for hydrogen, H<sub>2</sub>, production and storage, are provided. The system comprises an electrical power source (110), at least one electrochemical arrangement (120) arranged to produce hydrogen, H<sub>2</sub>, and at least one storage unit (130) arranged to store the hydrogen, H<sub>2</sub>, produced by the at least one electrochemical arrangement. The system further comprises a control unit (140) being configured to receive a first set of data (150) associated with a first cost of electrical power, receive a second set of data (160) associated with a second cost of at least one ancillary service associated with the electrical power, and control an operation of the at least one electrochemical arrangement, based on the electrical power provided from the electrical power source, by at least one optimization criterion (170) as a function of the first set of data and the second set of data.

IPC 8 full level  
**C25B 1/02** (2006.01); **C25B 15/02** (2021.01)

CPC (source: EP)  
**C25B 1/02** (2013.01); **C25B 15/02** (2013.01)

Citation (search report)

- [XYI] WO 2019189501 A1 20191003 - ASahi CHEMICAL IND [JP]
- [XYI] CN 112421660 A 20210226 - SICHUAN ENERGY INTERNET RESEARCH INSTITUTE OF TSINGHUA UNIV
- [XYI] WO 2021163769 A1 20210826 - FORTESCUE FUTURE IND PTY LTD [AU]
- [XYI] CN 110348709 B 20210312
- [XI] EP 1719235 A1 20061108 - STUART ENERGY SYS CORP [CA]
- [XI] KR 20200046908 A 20200507 - KOREA INST ENERGY RES [KR]

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
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