

Title (en)

PROCESS FOR MANUFACTURING HYDROGEN FROM SHALE

Title (de)

VERFAHREN ZUR HERSTELLUNG VON WASSERSTOFF AUS SCHIEFER

Title (fr)

PROCÉDÉ DE FABRICATION D'HYDROGÈNE DE SCHISTE

Publication

EP 3475219 A1 20190501 (FR)

Application

EP 17733904 A 20170614

Priority

- FR 1600999 A 20160622
- IB 2017053536 W 20170614

Abstract (en)

[origin: WO2017221113A1] Process for manufacturing hydrogen from shale gas (or shale oil) in which: a) The shale gas (or oil) produced is converted into hydrogen by catalytic steam reforming or by partial oxidation by oxygen from the air in a plant set up nearby, b) The carbon dioxide generated with the hydrogen is separated from the gas mixture and recycled into the shale gas reservoir, it is used to carry out hydraulic fracturing. It may pass into a buffer reservoir. c) The carbon dioxide is finally sequestered in the borehole created for the exploitation of the gas. d) The hydrogen is used either directly in an electric power plant set up on the site and (or) injected into a hydrogen distribution network constructed for this purpose. The cost price of the hydrogen thus produced and distributed is of the order of magnitude of the price of imported natural gas having an identical energy content, this including the investments with a return time of less than four years. The invention thus makes it possible to reduce the releases of greenhouse gases to a level lower than those anticipated by COP21 (United Nations Climate Change Conference).

IPC 8 full level

C01B 3/36 (2006.01); **C01B 3/34** (2006.01); **C01B 3/38** (2006.01); **E21B 43/00** (2006.01)

CPC (source: EP)

C01B 3/34 (2013.01); **C01B 3/36** (2013.01); **E21B 43/295** (2013.01); **C01B 2203/0233** (2013.01); **C01B 2203/0244** (2013.01); **C01B 2203/0283** (2013.01); **C01B 2203/0405** (2013.01); **C01B 2203/0415** (2013.01); **C01B 2203/043** (2013.01); **C01B 2203/046** (2013.01); **C01B 2203/0475** (2013.01); **C01B 2203/06** (2013.01); **C01B 2203/066** (2013.01); **C01B 2203/0883** (2013.01); **C01B 2203/1247** (2013.01); **C01B 2203/127** (2013.01); **C01B 2203/142** (2013.01); **C01B 2203/84** (2013.01); **C01B 2203/86** (2013.01); **Y02P 20/133** (2015.11); **Y02P 30/00** (2015.11)

Citation (search report)

See references of WO 2017221113A1

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

DOCDB simple family (publication)

FR 3053034 A1 20171229; EP 3475219 A1 20190501; WO 2017221113 A1 20171228

DOCDB simple family (application)

FR 1600999 A 20160622; EP 17733904 A 20170614; IB 2017053536 W 20170614