

Title (en)
PROCESS FOR LIQUEFYING HYDROGEN

Title (de)
VERFAHREN ZUM VERFLÜSSIGEN VON WASSERSTOFF

Title (fr)
PROCÉDÉ DE LIQUÉFACTION D'HYDROGÈNE

Publication
EP 2027423 A2 20090225 (DE)

Application
EP 07725781 A 20070601

Priority
• EP 2007004902 W 20070601
• DE 102006027199 A 20060612

Abstract (en)
[origin: CA2655037A1] The invention relates to a process for liquefying hydrogen. To reduce the specific energy consumption, the following process steps are used: a) the precooling of the hydrogen stream by indirect heat exchange against a pressurized LNG stream to a temperature of between 140 and 130 K, b) the precooling of the hydrogen stream by indirect heat exchange against a coolant to a temperature of between 85 and 75 K, c) where the precooling of the coolant takes place against a pressurized LNG stream, and d) the cooling and at least partial liquefaction of the precooled hydrogen stream takes place by indirect heat exchange against another hydrogen stream channeled through a closed cooling circuit, e) where the precooling of the condensed hydrogen stream, which is channeled through a closed cooling circuit, takes place against a pressurized LNG stream.

IPC 8 full level
F25J 1/02 (2006.01)

CPC (source: EP KR US)
F25J 1/001 (2013.01 - EP US); **F25J 1/0052** (2013.01 - EP US); **F25J 1/0067** (2013.01 - EP US); **F25J 1/0072** (2013.01 - EP US); **F25J 1/02** (2013.01 - KR); **F25J 1/0205** (2013.01 - EP US); **F25J 1/0221** (2013.01 - EP US); **F25J 1/0265** (2013.01 - EP US); **F25J 1/0268** (2013.01 - EP US); **F25J 1/0292** (2013.01 - EP); **F25J 2210/62** (2013.01 - EP US); **F25J 2240/60** (2013.01 - EP US); **F25J 2245/90** (2013.01 - EP US); **F25J 2270/904** (2013.01 - EP US)

Citation (search report)
See references of WO 2007144078A2

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA HR MK RS

DOCDB simple family (publication)
DE 102006027199 A1 20071213; CA 2655037 A1 20071221; CN 101466990 A 20090624; EP 2027423 A2 20090225; JP 2009540259 A 20091119; KR 20090016515 A 20090213; RU 2009100154 A 20100720; US 2010083695 A1 20100408; WO 2007144078 A2 20071221; WO 2007144078 A3 20080117

DOCDB simple family (application)
DE 102006027199 A 20060612; CA 2655037 A 20070601; CN 200780022069 A 20070601; EP 07725781 A 20070601; EP 2007004902 W 20070601; JP 2009514659 A 20070601; KR 20097000481 A 20090109; RU 2009100154 A 20070601; US 30435707 A 20070601