

Title (en)

METHOD FOR LIQUEFYING NATURAL GAS WITH A TRIPLE CLOSED CIRCUIT OF COOLANT GAS

Title (de)

VERFAHREN ZUR VERFLÜSSIGUNG VON ERDGAS MIT EINEM GESCHLOSSENEN DREIFACH-KÜHLGASKREISLAUF

Title (fr)

PROCÉDÉ DE LIQUÉFACTION DE GAZ NATUREL A TRIPLE CIRCUIT FERME DE GAZ RÉFRIGÉRANT

Publication

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Application

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Abstract (en)

[origin: WO2012175889A2] The present invention relates to a method for liquefying a natural gas primarily including methane, in which said natural gas to be liquefied is liquefied by performing the following concomitant steps: (a) circulating said natural gas to be liquefied that is circulating in three heat exchangers which are mounted in series and in which the gas is cooled to T3, T3 being no higher than the liquefaction temperature of said natural gas at atmospheric pressure; (b) the closed-circuit circulation of at least: a first stream of coolant gas at a pressure P1 that is lower than P3, which is entering the third exchanger and leaving said first exchanger, said first stream being obtained by expanding, in a first expansion valve, a first portion of said second stream to P3, which is higher than P2, said second stream circulating parallel to said stream of natural gas while entering said first exchanger and leaving said second exchanger; and a third stream at a pressure P2 higher than P1 and lower than P3 circulating parallel to said first stream which is entering said second exchanger and exiting said first exchanger, and which is obtained by expanding, in a second expansion valve, a second portion of said second stream exiting said first exchanger; and (c) said second stream of coolant gas at the pressure P3, which is obtained by compression by means of at least two first and second compressors arranged in series and coupled to said first and second expansion valves.

IPC 8 full level

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