

Title (en)

SYSTEM FOR COMBINED CYCLE MECHANICAL DRIVE IN CRYOGENIC LIQUEFACTION PROCESSES

Title (de)

SYSTEM FÜR EINEN MECHANISCHEN ANTRIEB MIT KOMBINIERTEM ZYKLUS BEI TIEFTEMPERATURVERFLÜSSIGUNGSPROZESSEN

Title (fr)

SYSTÈME POUR ENTRAÎNEMENT MÉCANIQUE À CYCLE COMBINÉ DANS DES PROCÉDÉS DE LIQUÉFACTION CRYOGÉNIQUE

Publication

EP 2361364 A2 20110831 (EN)

Application

EP 09756067 A 20091016

Priority

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Abstract (en)

[origin: WO2010053375A2] A system for producing liquefied and sub-cooled natural gas by means of a refrigeration assembly using a single phase gaseous refrigerant comprises at least two expanders; a compressor assembly; a heat exchanger assembly for heat absorption from natural gas; and a heat rejection assembly, in which the expanders are arranged in expander loops and the refrigerant to the respective expander is served in a compressed flow by means of the compressor assembly having compressors or compressor stages enabling adapted inlet and outlet pressures for the respective expander. According to the present the expanders and compressors assembly are assembled in two mechanically connected compressor and expander packages (200, 300) of which one is driven by a gas turbine (201) and the other is driven by a steam turbine (301), the steam primarily being generated by exhaust gases from the gas turbine in a waste heat recovery unit (202), and in that the expanders and compressors assemblies are distributed between the two compressor and expander packages to optimize the steam utilization and to balance the power generated by the gas turbine and the steam turbine.

IPC 8 full level

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See references of WO 2010053375A2

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