

Title (en)

MECHANICAL SYSTEM FOR GENERATING MECHANICAL ENERGY FROM LIQUID NITROGEN, AND CORRESPONDING METHOD

Title (de)

MECHANISCHES SYSTEM ZUR ERZEUGUNG MECHANISCHER ENERGIE AUS FLÜSSIGEM STICKSTOFF UND ENTSPRECHENDES VERFAHREN

Title (fr)

SYSTÈME MÉCANIQUE DE PRODUCTION D'ÉNERGIE MÉCANIQUE À PARTIR D'AZOTE LIQUIDE, ET PROCÉDÉ CORRESPONDANT

Publication

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Application

EP 17784668 A 20170830

Priority

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Abstract (en)

[origin: WO2018046807A1] The invention relates to a system for generating mechanical energy, comprising at least: a compressor; an expander; a heat exchanger; said system having a motor operative mode in which said system additionally comprises: means for the intake of pressurised liquid nitrogen in a liquid nitrogen intake inlet of said exchanger, means for the intake of air or gaseous nitrogen in an air or gaseous nitrogen intake inlet of said exchanger, means for discharging vaporised nitrogen at a vaporised nitrogen outlet of said exchanger, and means for discharging air or cooled nitrogen at another outlet of said exchanger for air or cooled gaseous nitrogen; means for the intake of said vaporised nitrogen into the interior of said expander in order to expand same; means for the intake of the air or cooled gaseous nitrogen into said compressor so as to produce compressed air or gaseous nitrogen therein; means for expanding said compressed air or gaseous nitrogen; means for heating the compressed air or gaseous nitrogen prior to intake into said expansion means or the interior of said expansion means; and means for recovering energy originating from the expansion of said vaporised nitrogen and the expansion of said compressed air or gaseous nitrogen.

IPC 8 full level

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CPC (source: EP US)

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Cited by

CN116105074A

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