Title (en)

DRIVE SYSTEM AND METHOD FOR DRIVING A MEANS OF PROPULSION OF A VEHICLE BY USING CRYOGENIC COOLING

Title (de)

ANTRIEBSSYSTEM UND VERFAHREN ZUM ANTREIBEN EINES VORTRIEBSMITTELS EINES FAHRZEUGS, UNTER VERWENDUNG KRYOGENER KÜHLUNG

Title (fr)

SYSTEME DE PROPULSION ET PROCÉDÉ D'ENTRAÎNEMENT D'UN MOYEN DE PROPULSION D'UN VÉHICULE, EN UTILISANT UN REFROIDISSEMENT CRYOGÉNIQUE

Publication

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Application

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Abstract (en)

[origin: WO2017025224A1] The invention relates to a drive system (100) and to a method for providing kinetic energy for a means of propulsion (150) of an aircraft. The drive system (100) is designed as a series hybrid system, which has an electric motor (140) for driving the means of propulsion (150), a generator (120) for providing the electrical energy for the electric motor (140), and an internal combustion engine (110) for providing the kinetic energy for operating the generator (120). The generator (120) is designed as a superconducting generator (120). Hydrogen is used as a coolant for the generator (120). As soon as the hydrogen in the region surrounding the generator (120) exceeds a specified temperature, said hydrogen is drawn from the generator (120) in the gaseous state and fed to a device (110, 180), which processes the hydrogen in such a way that energy that can be used in the drive system (100) is provided. The device (110, 180) can be a fuel cell (180) and/or the internal combustion engine (110) designed as a hydrogen turbine, for example.

IPC 8 full level

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CPC (source: EP US)

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