Title (en)

POWER MANAGEMENT SYSTEM FOR MANAGING ELECTRICAL POWER SOURCES IN AIRCRAFT

Title (de)

ENERGIEVERWALTUNGSSYSTEM ZUR VERWALTUNG VON ELEKTRISCHEN ENERGIEQUELLEN IN FLUGZEUGEN

Title (fr)

SYSTÈMES, AGENCEMENTS, STRUCTURES ET PROCÉDÉS POUR AÉRONEF

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Abstract (en)

[origin: GB2587668A] A thermal management system has a rotating hub 60 of an aircraft propulsion system with an aperture 64 suitable for facilitating airflow into a nacelle 20 to manage the temperature of components. The hub may have a duct extending through it with the aperture opening into the duct. The propulsion system preferably has propellers 12 and the hub is a propeller hub; the nacelle being part of an aircraft wing. An airflow generator (fig.6,50), such as a fan (fig.6,52) driven by the propeller drive shaft (fig.6,54), may be provided to draw air into the nacelle through the aperture. A fairing or nose cone 62 may be provided over the hub, also provided with an aperture and duct. The fairing may be 3D printed and/or cast with channels 66 formed in the fairing duct; when the fairing is rotated the channels, in the form of an axial compressor, draw air into the nacelle, increasing the pressure of the airflow. The components may be an electric motor 14 and/or power electronics. The system may provide cooling when the propellers are rotating but the aircraft is not in flight or in motion.

IPC 8 full level

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