

Title (en)

LIGHTWEIGHT PISTON COMPRISING HEAT PIPES

Title (de)

LEICHTMETALLKOLBEN MIT WÄRMEROHREN

Title (fr)

PISTONS EN METAL LEGER AYANT DES TUBES ECHANGEURS DE CHALEUR

Publication

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Application

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Abstract (en)

[origin: WO2006015584A1] The invention relates to a lightweight piston (10) comprising heat pipes. The aim of the invention is to simplify the structure of such a piston while at the same time allowing for an improved heat dissipation from the piston areas subject to heat load while avoiding thermal stress. For this purpose, a plurality of liquid-filled heat pipes (6) each having an evaporator (6a) and a condenser end (6b) is used, whereby the evaporator end is configured by short pipe sections that are oriented in the thickness at bottom towards the piston head and towards the focal point and that are interlinked by means of a composite heat pipe (7) extending in parallel to the piston head. At least two pipe sections functioning as the condenser end (6b) are coupled with the composite heat pipe (7) in such a manner as to configure, by way of a pipe connection (8) arranged on the condenser ends (7a), a closed coolant cycle between the evaporator end, composite heat pipe and condenser end of the heat pipes (6).

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