

Title (en)

USE OF HIGHLY EFFICIENT WORKING MEDIA FOR HEAT ENGINES

Title (de)

VERWENDUNG VON HOCH EFFIZIENTEN ARBEITSMEDIEN FÜR WÄRMEKRAFTMASCHINEN

Title (fr)

UTILISATION DE FLUIDES DE TRAVAIL À HAUT RENDEMENT POUR DES MACHINES THERMODYNAMIQUES

Publication

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Application

EP 14730880 A 20140616

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Abstract (en)

[origin: CA2917085A1] The invention relates to a heat engine for performing an organic Rankine cycle (ORC), comprising an evaporator, a motor, a condenser, and a circuit containing a fluid working medium, wherein the working medium has a critical pressure (pc) between 4000 kPa and 6500 kPa, preferably between 4200 kPa and 6300 kPa, the working medium has a critical temperature (Tc) between 450 K and 650 K, preferably between 460 K and 600 K, the working medium has a molar mass between 50 g/mol and 80 g/mol, preferably between 60 g/mol and 75 g/mol, and the gaseous working medium partially condenses out during an adiabatic expansion. The invention further relates to the use of a working medium having a critical pressure (pc) between 4000 kPa and 6500 kPa, preferably between 4200 kPa and 6300 kPa, having a critical temperature (Tc) between 450 K and 650 K, preferably between 460 K and 600 K, and having a molar mass between 50 g/mol and 80 g/mol, preferably between 60 g/mol and 75 g/mol, in a heat engine, wherein the gaseous working medium partially condenses out during an adiabatic expansion of an organic Rankine cycle (ORC).

IPC 8 full level

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