

Title (en)
DRIVE SYSTEM COMPRISING COUNTER-ROTATING INTERNAL COMBUSTION ENGINE WITH COUNTER-ROTATING POWER OUTPUT SHAFTS

Title (de)
ANTRIEBSSYSTEM MIT GEGENLÄUFIGER BRENNKRAFTMASCHINE MIT GEGENLÄUFIGEN LEISTUNGSAusGABEWELLEN

Title (fr)
SYSTÈME D'ENTRAÎNEMENT DOTÉ DE MOTEUR À COMBUSTION INTERNE CONTRAROTATIF À ARBRES DE SORTIE CONTRAROTATIFS

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Application
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Abstract (en)
[origin: WO2020141981A1] A drive system comprises a counter-rotating internal combustion engine (1) which has a cylinder (2) with two double-acting engine cases (3a) and (3b) attached to it and with counter-rotating crankshafts (4a) and (4b) situated therein and power output shafts (7) which project on both sides. Each crankshaft (4a) and (4b) is coupled with a piston assembly (13). Each piston assembly (13) consists of a working piston (13a) and two sliding compensating pistons (13b) which are separated from the working piston (13a) with the help of spiral springs (13d). Fuel injectors (16), steam injectors (17) and ignition elements (18) are located inside the cylinder (2). Entries of fuel dosing devices (19), which power particular fuel injectors (16), are connected to a fuel installation via fuel heaters (21). A pair of inlet ports of compressed air (26) and a pair of outlet ports of combustion products (28) are located in the cylinder (2) wall. Furthermore, one or two rotor systems (29) are connected to all power output shafts (7) via a coupling (35) depending on an invention embodiment. Rotor systems (29) comprise rotors (30) which are secured in rotor rims (30b), whereas rotor rims (30b) are rotationally secured in stator rims (31). Magnetic dipoles (30c) are built in rotor rims (30b), whilst induction coils (31a) are located in stator rims (31) and they are connected to an electrical energy collection and discharge assembly (33) via a commutation system (32).

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