

Title (en)
HYDROSTIRLING-MASCHINE

Title (de)
HYDROSTIRLING-MASCHINE

Title (fr)
MACHINE HYDRAULIQUE STIRLING

Publication
EP 3329110 B1 20191120 (DE)

Application
EP 16744703 A 20160722

Priority
• DE 102015009975 A 20150731
• EP 2016067523 W 20160722

Abstract (en)
[origin: WO2017021176A1] The invention describes a hydro-Stirling engine having at least two hydro-Stirling units (10, 20), having an energy converter unit and having a common working fluid circuit which has, for each hydro-Stirling unit, at least one working fluid line (50, 60) which connects the hydro-Stirling unit to the energy converter unit. To achieve that a driven axle in the energy converter unit can always rotate in the same direction, and in order to realize hydraulic decoupling of the hydro-Stirling units (10, 20), the energy converter unit is a turbine unit (30) which has a turbine vessel (32) and a turbine wheel (34), in particular a Pelton turbine wheel, which is arranged in said turbine vessel (32). Here, the working fluid lines (50, 60) extend between the hydro-Stirling units (10, 20) and the turbine unit (30) such that working fluid that flows from a hydro-Stirling unit (10, 20) to the turbine unit (30) firstly impinges on the turbine wheel (34) and then falls into a region of the turbine vessel (32) below the turbine wheel (34). Furthermore, the working fluid circuit has, for each hydro-Stirling unit (10, 20), at least one working fluid return line (70, 74) which connects the turbine unit (30) to the hydro-Stirling unit (10, 20). Here, each displacement piston unit has a cylinder shell (14, 24) which extends downwardly from the displacement piston (13, 23) and the outer surface of which is substantially aligned with the outer surface of the displacement piston (13, 23).

IPC 8 full level
F02G 1/043 (2006.01)

CPC (source: EP)
F02G 1/0435 (2013.01)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
DE 102015009975 A1 20170202; DE 102015009975 B4 20170316; EP 3329110 A1 20180606; EP 3329110 B1 20191120;
WO 2017021176 A1 20170209

DOCDB simple family (application)
DE 102015009975 A 20150731; EP 16744703 A 20160722; EP 2016067523 W 20160722