

Title (en)

ROTARY MACHINE WITH TWO NON-PARALLEL AXES IN RESPECT OF ONE ANOTHER

Publication

EP 0031002 B1 19861217 (DE)

Application

EP 80105799 A 19800925

Priority

DE 2946304 A 19791116

Abstract (en)

[origin: US4548559A] A rotary piston displacing machine for use as a pump compressor or power engine, as well as a hydrostatic coupling. The machine has a disk-shaped rotor rotatable in a housing, several similar diametrically opposed rotary vanes which penetrate the annular groove of the working space, which vanes can be joined or formed together in a second rigid rotor, the impeller, the disk-shaped rotor having a rotational axis forming an acute angle with the axis of the impeller. The disk-shaped rotor is positioned obliquely on the working space and is provided with radial slots for receiving the vanes which reach down to the bottom of the working space to sealingly lock the adjacent working chambers formed in the working space. The displacement operation takes place by the rotation of the vanes and the changing cross-section of the groove of the working space. If the cross-section of the working space approaches zero on one point of its periphery, i.e., when the disk-shaped rotor touches this point at the bottom of the working space, this displacing machine has neither a dead space volume nor squeezing points. It is sufficient if only one vane locks sealingly the adjacent chambers of the working space within the area of greatest cross-section since a stationary separating point exists already there. The shape of the cross-section of the working space, the shape and number of the vanes, and the shape of the rotors can be selected freely within a wide range. However, a certain symmetry of the rotation must be maintained, and the parts must be naturally adapted one to another. This rotary piston machine is suitable for use as a machine for displacing all kinds of freely flowing media, as well as for use as a power engine in the form of a displacer turbine.

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