

Title (en)
SCREW EXPANDER LIQUID PUMP

Title (de)
FLÜSSIGKEITSPUMPE MIT SCHNECKENEXPANDER

Title (fr)
POMPE À LIQUIDE POUR DÉTENDEUR À VIS

Publication
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Application
EP 10859603 A 20101202

Priority
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Abstract (en)
A liquid pump of a screw expander is disclosed, applicable to an Organic Rankin Cycle (ORC). The liquid pump of a screw expander includes a semi-sealed or fully sealed shell. An expander unit and a liquid pump unit are disposed in the shell. The expander unit includes a screw rotor, and the liquid pump unit includes a screw rotor. The rotor of the expander unit is fixedly connected to the rotor of the liquid pump unit. The rotor of the liquid pump unit rotates under driving of the rotor of the expander unit. In the liquid pump of a screw expander applied to the ORC, since a resistance torque of the female rotor is small, the liquid pump does not wear even when the liquid viscosity is low, contributing to high reliability of the liquid pump. Meanwhile, the liquid pump is driven by the screw expander, thereby further improving power generation efficiency of the ORC. In addition, the semi-sealed or fully sealed shell can effectively prevent leakage of a refrigerant.

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