

Title (en)
HELICAL GEAR PUMP

Publication
EP 0100627 B1 19870520 (EN)

Application
EP 83304217 A 19830720

Priority
ZA 825185 A 19820720

Abstract (en)
[origin: EP0100627A1] A helical gear pump 18 has a rotor 44 rotatably mounted about the axis, the drive shaft 22, and at least two stators 42.1, 42.2, 42.3 of resilient material mounted operatively in series around the rotor 44, at least one of the stators 42.2 having an outer wall which is unconstrained against radial inward movement along a portion of its length. Delivery pressure in a clearance space 48 around the outside of such unconstrained wall of the stator 42.2, compensates at least in part for the internal pressure exerted radially outwardly tending to expand the stator 42.2. Such an arrangement, makes it possible the provision of less initial interference between rotor 44 and stator 42.2 thereby resulting in the use of a lower starting torque and making it possible for such pumps when fitted in boreholes, to be hand driven or to be driven by a windmill. Such an arrangement also makes possible the effective pumping of hot liquids, by having initial interference between the rotor 44 and the stator 42.2 than would have been necessary with a conventional rotor.

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IPC 8 full level
E21B 43/00 (2006.01); **F04C 2/107** (2006.01)

CPC (source: EP)
E21B 43/00 (2013.01); **F04C 2/1076** (2013.01)

Citation (examination)
• DE 1728143 A1 19720330 - STREICHER MAX
• PUMPING MANUEL, 6th edition, 1979, pp. 67-70

Cited by
FR2696792A1; US11759212B2; WO2009040442A1

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EP 0100627 A1 19840215; **EP 0100627 B1 19870520**; AU 1692783 A 19840126; AU 554747 B2 19860904; BR 8303901 A 19840228; DE 3371674 D1 19870625; ES 524252 A0 19840616; ES 8405901 A1 19840616; GB 2124305 A 19840215; GB 2124305 B 19850829; GB 8319576 D0 19830824; JP S5974385 A 19840426; MW 3283 A1 19850213; NZ 204931 A 19860611; ZW 16083 A1 19840208

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