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(71) Applicant (for CA only): **SCHLUMBERGER CANADA LIMITED** [CA/CA]; 525-3rd Avenue S.W., Calgary, Alberta T2P 0G4 (CA).

(71) Applicant (for FR only): **SERVICES PETROLIERS SCHLUMBERGER** [FR/FR]; 42 rue Saint Dominique, F-75007 Paris (FR).

(71) Applicant (for GB, JP, NL only): **SCHLUMBERGER HOLDINGS LIMITED**; P.O. Box 71 Craigmuir Chambers Road Town, Tortola, British Virgin Islands, NO ZIP (VG).

(71) Applicant (for AL, AM, AU, AZ, BF, BG, BJ, BY, CF, CG, CI, CM, CO, CZ, DE, DK, GA, GN, GQ, GR, GW, HU, ID, IE, IL, IT, KG, KP, KR, KZ, LT, MD, ML, MR, MX, MY, NE, NO, NZ, OM, PL, RO, RU, SI, SK, SN, TD, TG, TJ, TM, TN, TR, TT, UZ, ZA only): **SCHLUMBERGER TECHNOLOGY B.V.** [NL/NL]; Parkstraat 83-89, NL-2514 The Hague (NL).

(71) Applicant (for AE, AG, AO, AT, BA, BB, BE, BH, BR, BW, BZ, CH, CN, CR, CU, CY, DM, DO, DZ, EC, EE, EG, ES, FI, GD, GE, GH, GM, GT, HN, HR, IN, IS, KE, KM, KN, LA, LC, LK, LR, LS, LU, LV, LY, MA, MC, ME, MG, MK, MN, MT, MW, MZ, NA, NG, NI, PG, PH, PT, RS, SC, SD, SE, SG, SL, SM, SV, SY, SZ, TZ, UA, UG, VC, VN, ZM, ZW only): **PRAD RESEARCH AND DEVELOPMENT LIMITED**; P.O. Box 71 Craigmuir Chambers, Road Town, Tortola, British Virgin Islands, NO CODE (VG).

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(54) Title: POSITIVE DISPLACEMENT PUMP COMPRISING AN EXTERNALLY ASSISTED VALVE

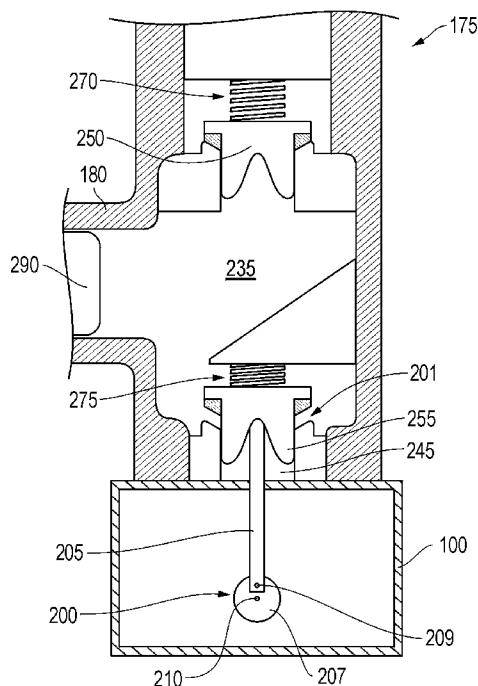


FIG. 2

(57) Abstract: A positive displacement pump having a valve with an actuation guide for assisting its actuation. The valve may be configured for controlling fluid communication relative to a chamber of the pump with the valve actuation guide positioned external to the chamber and configured to assist in the controlling. The valve actuation guide itself may include an arm extending into a valve actuation assembly below the valve. In such embodiments, the arm may be reciprocated by crankshaft, hydraulic, or other means. Alternatively, the valve actuation assembly may include electromagnetic means for assisting in actuation of the valve.

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(72) **Inventors; and**

(75) **Inventors/Applicants (for US only):** **WAGO, Toshimichi** [CO/US]; 2500 Old Farm Road, # 323, Houston, Texas 77063 (US). **GAMBIER, Philippe** [FR/US]; 1514 Holly River, Houston, Texas 77077 (US). **PESSIN, Jean-Louis** [FR/US]; 11935 Drexel Hill, Houston, Texas 77077 (US). **LUHARUKA, Rajesh** [IN/US]; 12700 Stafford Road, # 638, Stafford, Texas 77477 (US).

(74) **Agent:** **CATE, David**; 110 Schlumberger Drive, MD-1, Sugar Land, Texas 77478 (US).

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