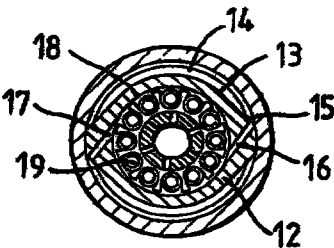
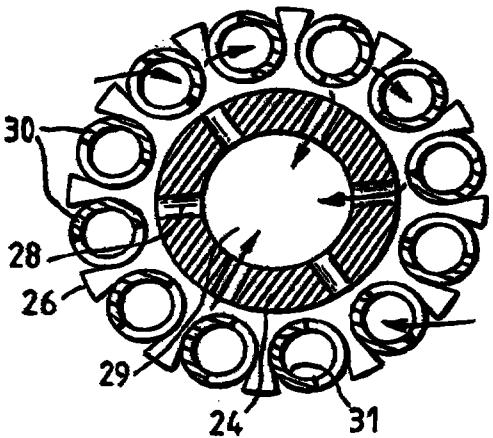




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : E21B 4/02, F03B 13/02, F01D 1/34	A1	(11) International Publication Number: WO 00/08293 (43) International Publication Date: 17 February 2000 (17.02.00)
(21) International Application Number: PCT/GB99/02450 (22) International Filing Date: 27 July 1999 (27.07.99) (30) Priority Data: 9816607.7 31 July 1998 (31.07.98) GB (71) Applicant (for all designated States except US): ROTTECH HOLDINGS LIMITED [GB/GB]; Whitemyres Avenue, Mastrick Industrial Estate, Aberdeen AB16 6HQ (GB). (72) Inventors; and (75) Inventors/Applicants (for US only): VAN DRENTHAM-SUSMAN, Hector, Filippus, Alexander [GB/GB]; 9 Craigston Gardens, Westhill, Skene, Aberdeen AB32 6NL (GB). STEWART, Kenneth, Roderick [GB/GB]; 58 Angusfield Avenue, Aberdeen AB15 6AS (GB). (74) Agents: McCALLUM, William, Potter et al.; Cruikshank & Fairweather, 19 Royal Exchange Square, Glasgow G1 3AB (GB).		(81) Designated States: AB, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published With international search report.
(54) Title: DRILLING TURBINE   (57) Abstract A turbine (4) suitable for use in down-hole drilling and the like, and comprising a tubular casing (11) enclosing a chamber (18) having rotatably mounted therein a rotor (19). The rotor (19) comprises at least one turbine wheel (30a) with an annular array of angularly distributed blades (30). The blades (30) are orientated with drive fluid receiving faces (31) thereof facing generally rearwardly of a forward direction of rotation of the rotor (19), and a generally axially extending inner drive fluid passage means (14) generally radially inwardly of said rotor (19). The casing (11) also has generally axially extending outer drive fluid passage means (16), and one of the inner and the outer drive fluid passages (14, 16) are provided with outlet nozzles (17) formed and arranged for directing at least one jet of drive fluid onto the blade drive fluid receiving faces (31) as the blades (30) traverse the nozzle means (17) for imparting rotary drive to said rotor (19). The other of the inner and the outer drive fluid passages (14, 16) is provided with exhaust aperture means (28) for exhausting drive fluid from the turbine (4).		