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(21) International Application Number: PCT/US98/14855 (22) International Filing Date: 17 July 1998 (17.07.98) (30) Priority Data: 60/053,134 18 July 1997 (18.07.97) US (71) Applicant: DRESSER INDUSTRIES, INC. [US/US]; Suite 4100, 2001 Ross Avenue, Dallas, TX 75201-2980 (US). (71)(72) Applicant and Inventor: DEATON, Thomas, M. [US/US]; 13305 Belfield, Farmers Branch, TX 75234 (US). (74) Agent: FELGER, Thomas, R.; Baker & Botts, L.L.P., 2001 Ross Avenue, Dallas, TX 75201-2980 (US).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BE, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, 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, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, 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 <i>With international search report.</i>
(54) Title: HYDRAULIC FLUID ACTUATOR WITH METAL TO METAL SEALS		
(57) Abstract		
An improved fluid actuator is provided. The fluid actuator (25) comprises a variable volume fluid chamber (124). A first tube (162) is fixed within the variable volume fluid chamber (124). The first tube (162) has a first sealing surface (142) and a second sealing surface (144). A piston (100) is slidably disposed within the variable volume fluid chamber (124) and slidably movable over the first tube (162) between a first position and a second position. The piston (100) comprises a first sealing surface (140) and a second sealing surface (146). The piston first sealing surface (140) and the first tube first sealing surface (142) cooperate to form a seal between the piston (100) and the first tube (162) when the piston (100) is in the first position. The piston second sealing surface (146) and the first tube second sealing surface (144) cooperate to form a seal between the piston (100) and the first tube (162) when the piston (100) is in the second position.		