

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
15 April 2004 (15.04.2004)

PCT

(10) International Publication Number
WO 2004/030860 A3

(51) International Patent Classification⁷: **B24B 37/04**,
57/02, G05D 7/06, G01F 11/02

(21) International Application Number:
PCT/US2003/028397

(22) International Filing Date:
10 September 2003 (10.09.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/065,275 30 September 2002 (30.09.2002) US

(71) Applicant (for all designated States except US): **EMERSON ELECTRIC CO.** [US/US]; 8000 West Florissant, St. Louis, MO 63136 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **WHEELER, Matthew, G.** [US/US]; 803 Eugene Street, Hood River, OR 97031 (US).

(74) Agent: **GLEASON, Mark, L.**; Howrey Simon Arnold & White LLP, 750 Bering Drive, Houston, TX 77057-2198 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, 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, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

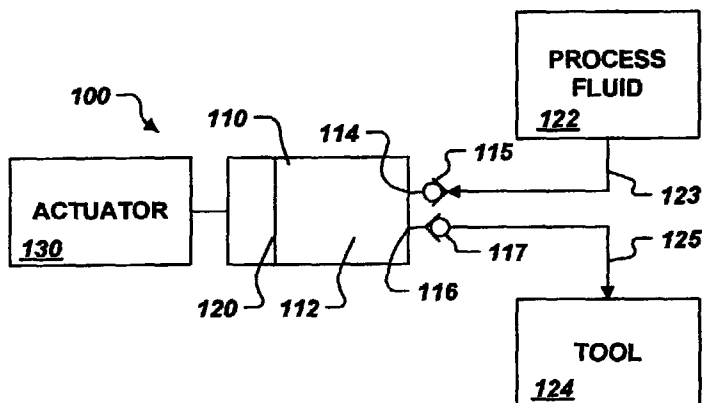
Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
30 September 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: FLOW CONTROL SYSTEM



(57) Abstract: A flow control system (100) includes a substantially rigid vessel (110) with a process fluid reservoir (112) situated in the rigid vessel (110) is in fluid communication with an outlet (116). A movable member (120) and/or a working fluid is situated in the rigid vessel (110) so as to selectively expel process fluid (122) from the outlet (116). Where a movable member (120) is employed, movement of the movable member (120) in a first direction causes process fluid (122) to be drawn into an inlet (114) and movement of the movable member (120) in a second direction causes process fluid (122) to be expelled from the outlet (116). In other implementations, the working fluid is metered into a working fluid reservoir (340) to compress a flexible process fluid reservoir (112)

and expel process fluid (122) therefrom.