

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
23 March 2006 (23.03.2006)

PCT

(10) International Publication Number
WO 2006/029464 A1

(51) International Patent Classification:
C02F 1/06 (2006.01)

(21) International Application Number:
PCT/AU2005/001404

(22) International Filing Date:
14 September 2005 (14.09.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2004905255 14 September 2004 (14.09.2004) AU

(71) Applicant (for all designated States except US): **AQUA DYNE, INC.** [AU/AU]; Intelpro, Level 7, 102 Adelaide Street, Brisbane, Queensland 4000 (AU).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **PAXTON, Gregory Mark** [AU/AU]; Intelpro, Level 7, 102 Adelaide Street, Brisbane, Queensland 4000 (AU).

(74) Agents: **INTELLEPRO** et al.; Level 7, 102 Adelaide Street, Brisbane, Queensland 4000 (AU).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, 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, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

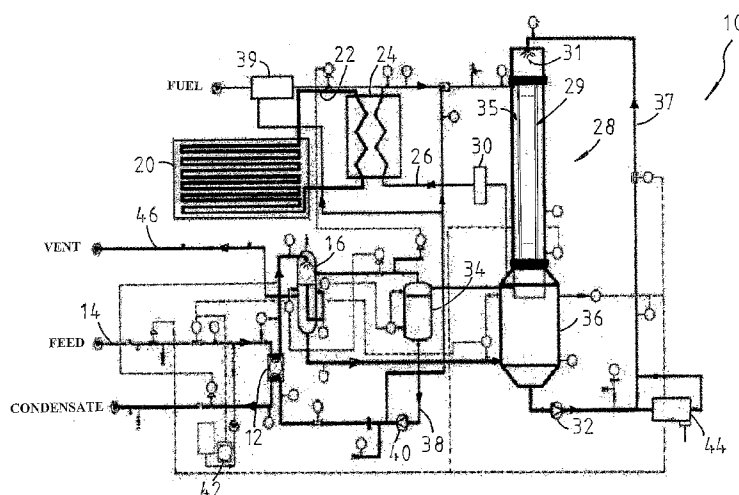
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT,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

Published:

— with international search report

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: WATER DISTILLATION SYSTEM



(57) Abstract: Provided is a water distillation system (10) for distilling sea or brackish water. The system has a feed water arrangement (14 and 37) for supplying feed water from a feed water source (FEED) to one or more flashing stages (28). Each flashing stage has a water flash evaporator (29) for vaporising at least a part of the feed water therein, and a condenser (35) for receiving the vapour and to convert at least a part of the vapour into distilled water. A heat storage arrangement (20) provided with a heat generating source for storing heat energy is used to heat a fluid medium flowing through it. A heat exchange arrangement (24) receives the hot fluid medium and transfer heat to a stream of vapour flowing under pressure from each flashing stage. The vapour leaving the heat exchange arrangement being at a raised temperature is arranged to be condensed into water at the condenser and to transfer some of its latent heat to the evaporator.

WO 2006/029464 A1