



- (51) International Patent Classification:
B63J 4/00 (2006.01)
- (21) International Application Number:
PCT/DK2012/050038
- (22) International Filing Date:
27 January 2012 (27.01.2012)
- (25) Filing Language: Danish
- (26) Publication Language: English
- (30) Priority Data:
PA 2011 70108 3 March 2011 (03.03.2011) DK
- (71) Applicant (for all designated States except US): **BAWAT A/S** [DK/DK]; Baldershøj 28, DK-2635 Ishøj (DK).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **HUMMER, Jan Stumpe** [DK/DK]; Christiansholms Tværvej 5, DK-2930 Klampenborg (DK).
- (74) Agent: **LUND OLSEN, Lau**; Zacco Denmark A/S, Hans Bekkevolds Allé 7, DK-2900 Hellerup (DK).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ,

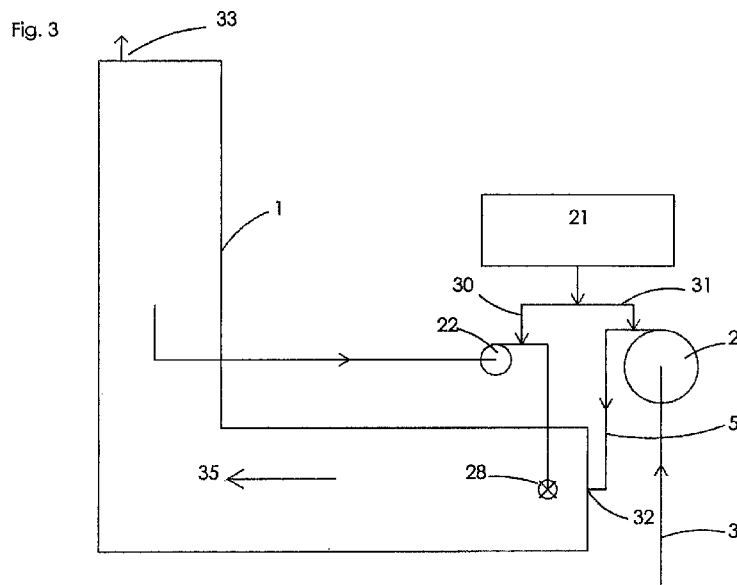
CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(54) Title: SYSTEM FOR TREATING BALLAST WATER IN BALLAST TANKS



(57) Abstract: A system for treating ballast water in ballast tanks (1) onboard vessels, said system (20) comprising: one or more ballast tanks (1), a circulation pump (22) circulating or recirculating, via a tubing, ballast water from and to the one or more ballast tanks (1); a nitrogen and/or carbon dioxide generator (21) which is connected to the tubing (22) on the delivery side of the recirculation pump (22) in such a manner that nitrogen and/or carbon dioxide can be supplied to the ballast water; and one or more nozzle heads (28) that are functionally connected to the tubing and is/are arranged in one or more ballast tanks (1), said one or more nozzle heads comprising at least one nozzle (34) for injection of the gas-containing water into the one or more ballast tanks (1); and wherein at least one nozzle (34) is configured for powered rotation about both a first and a second axis which is perpendicular or not perpendicular to the first axis to the effect that a three-dimensional mixer pattern is produced.