



(43) International Publication Date
17 July 2014 (17.07.2014)

(10) International Publication Number
WO 2014/108706 A3

(51) International Patent Classification:

F01K 3/00 (2006.01) *F01K 23/10* (2006.01)
F01K 15/02 (2006.01) *F01K 23/12* (2006.01)
F01K 21/00 (2006.01) *F01K 23/14* (2006.01)
F01K 21/02 (2006.01) *F01K 23/18* (2006.01)
F01K 23/06 (2006.01) *F01K 25/10* (2006.01)

(21) International Application Number:

PCT/GB2014/050089

(22) International Filing Date:

13 January 2014 (13.01.2014)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

1300496.5 11 January 2013 (11.01.2013) GB

(71) Applicant: **DEARMAN ENGINE COMPANY LTD**
[GB/GB]; 1 Finsbury Circus, London EC2M 7SH (GB).

(72) Inventors: **AYRES, Michael**; 78 Brockley Grove, London SE4 1RJ (GB). **CLARKE, Henry**; 60 Glengall Road, London NW6 7ER (GB). **DEARMAN, Michael**; 52 Thornbera Road, Bishops Stortford, Hertfordshire CM23 3NL (GB).

(74) Agents: **JACKSON, Richard, Eric** et al.; Carpmals & Ransford LLP, One Southampton Row, London WC1B 5HA (GB).

(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, BN, 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, IR, IS, JP, KE, KG, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, 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, 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, KM, 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))

(88) Date of publication of the international search report:

23 April 2015

(54) Title: CRYOGENIC ENGINE SYSTEM

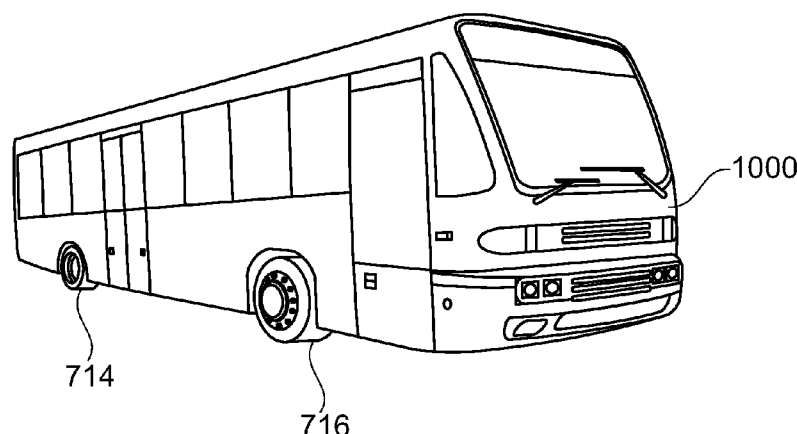


Fig. 1

(57) Abstract: A system (100) comprises a cryogenic engine (16) and a power generation apparatus, wherein the cryogenic engine and the power generation apparatus are coupled with each other to permit the cryogenic engine (16) and the power generation apparatus to work co-operatively with each other in a synergistic manner. The cryogenic engine (16) and the power generation apparatus are mechanically and optionally thermally coupled with each other so that the output means is shared between the cryogenic engine (16) and the power generation apparatus and that the two systems can be operated in the most power efficient manner and may also thermally interact to the potential advantage of both performance and economy.



WO 2014/108706 A3