

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
02 November 2023 (02.11.2023)



(10) International Publication Number
WO 2023/209040 A2

(51) International Patent Classification:

B01F 23/41 (2022.01) **B01F 33/502** (2022.01)
B01F 23/40 (2022.01) **C10L 1/32** (2006.01)
B01F 35/21 (2022.01)

(72) **Inventors:** **MILES, Jason Victor**; Eastcastle House, 27-28 Eastcastle Street, London W1W 8DH (GB). **BRUNELLE, Patrick**; Eastcastle House, 27-28 Eastcastle Street, London W1W 8DH (GB). **SELSE, Dennis**; Korvettgrand 4, 471 61 Myggenas (SE).

(21) International Application Number:

PCT/EP2023/061021

(22) International Filing Date:

26 April 2023 (26.04.2023)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2206071.9 26 April 2022 (26.04.2022) GB

(71) **Applicants:** **QUADRISE INTERNATIONAL LIMITED** [GB/GB]; Eastcastle House, 27-28 Eastcastle Street, London W1W 8DH (GB). **NOURYON CHEMICALS INTERNATIONAL B.V.** [NL/NL]; Velperweg 76, 6824 BM Arnhem (NL).

(74) **Agent:** **BARROW, Nicholas**; Venner Shipley LLP, Byron House, Cambridge Business Park, Cowley Road, Cambridge EC1A 4HD (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, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, 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, ST, SV, SY, TH,

(54) Title: SYSTEM FOR PRODUCING AN OIL-IN-WATER EMULSION

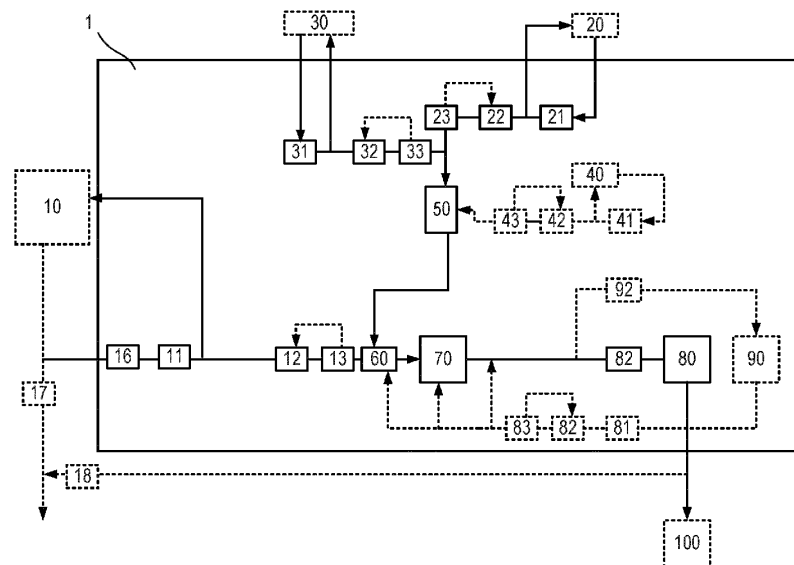


Fig. 1

(57) **Abstract:** A system for producing an oil-in-water emulsion; the system comprising: a first input for coupling to a source of fuel on a vehicle; a second input for coupling to a source of water; a third input for coupling to a source of first additive; a mixing section for mixing the water and the first additive to form an aqueous phase; and a blender for blending the aqueous phase with the fuel to form the oil-in-water emulsion; wherein the first input is coupled to the blender; the second input and the third input are coupled to the mixing section; and the mixing section is coupled to the blender.

[Continued on next page]

WO 2023/209040 A2

TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS,
ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST, 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, ME, 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:

- *without international search report and to be republished upon receipt of that report (Rule 48.2(g))*
- *in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE*