

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
28 November 2024 (28.11.2024)



(10) International Publication Number
WO 2024/240900 A1

(51) International Patent Classification:
B01J 19/32 (2006.01)

(21) International Application Number:
PCT/EP2024/064289

(22) International Filing Date:
23 May 2024 (23.05.2024)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/504,017 24 May 2023 (24.05.2023) US

(71) Applicant: **JOHNSON MATTHEY PUBLIC LIMITED COMPANY** [GB/GB]; 5th Floor, 25 Farringdon Street, London EC4A 4AB (GB).

(72) Inventors: **BRUNSON, Gordon Wayne**; c/o Johnson Matthey Research Lab, 214 Bourne Blvd, Savannah, Georgia 31408 (US). **CAGLE, Joshua Michael**; c/o Johnson Matthey, 214 Bourne Blvd, Savannah, Georgia 31408 (US).

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

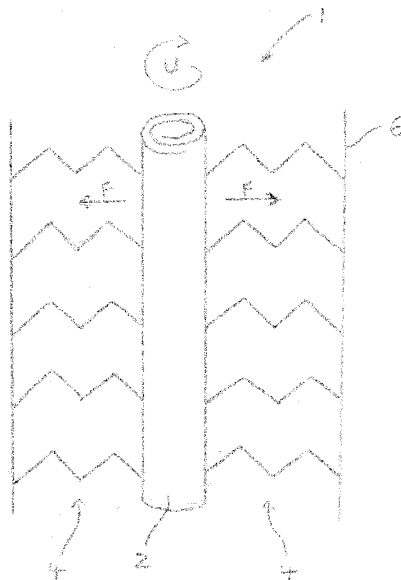
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, 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).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- of inventorship (Rule 4.17(iv))

(54) Title: EXPANDABLE CATALYST SUPPORT CONFIGURATION

Fig. 1



(57) Abstract: An expandable catalyst support configuration for a reactor, the expandable catalyst support configuration comprising: an expansion tube; and an expandable catalyst support surrounding the expansion tube, wherein the expansion tube is in the form of a spiral-wound tube which is configured to push the expandable catalyst support outwards when it unfurls during installation of the expandable catalyst support configuration in the reactor, and wherein the spiral-wound tube is formed of a spiral-wound metal sheet having surface areas which contact and slide over each other during unfurling, and wherein at least a portion of the surface areas have a roughened matte finish to facilitate unfurling of the spiral-wound metal sheet.

WO 2024/240900 A1

[Continued on next page]

Published:

- *with international search report (Art. 21(3))*
- *in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE*