



(51) International Patent Classification:

F01N 3/28 (2006.01)

(21) International Application Number:

PCT/IN2019/050948

(22) International Filing Date:

23 December 2019 (23.12.2019)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

201811049096 26 December 2018 (26.12.2018) IN

(71) Applicant: **HERO MOTOCORP LIMITED** [IN/IN];

The Grand Plaza, Plot No.2, Nelson Mandela Road, Vasant Kunj - Phase II, New Delhi 110070 (IN).

(72) Inventors: **RAJPUT, Karan**; 101, Ridhi Sidhi Residen-

cy, Jagatpura, Jaipur 302017, Rajasthan (IN). **TAKII, Osamu**; 211-19, Matsushiro-Cho, Naka-Ku, Hamamatsu-Shi, Shizuoka-Ken, 430-3947 (JP).

(74) Agent: **MADHUSOOTHANAN, Kisothe**; L&L Partners,

1st & 9th Floors, Ashoka Estate, Barakhamba Road, New Delhi 110001 (IN).

(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, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, 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, 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, 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))

(54) Title: EXHAUST SYSTEM OF VEHICLE

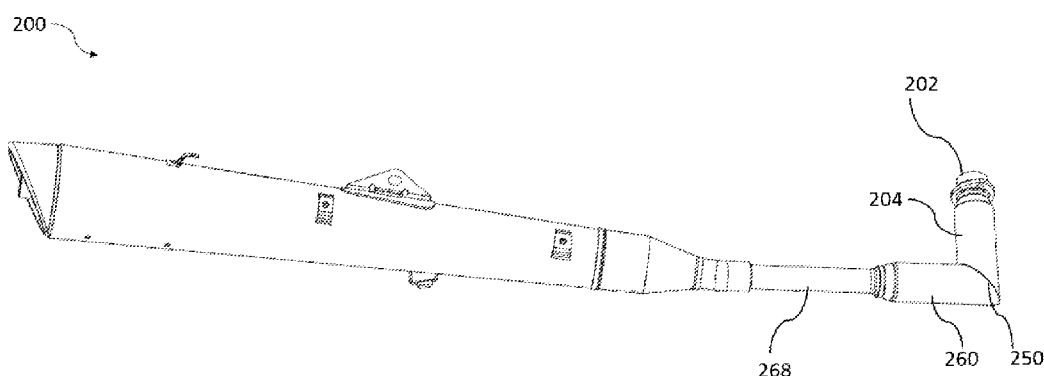


Figure 3

(57) **Abstract:** An internal combustion engine (22) is provided. The two wheeled vehicle (100) comprising: a frame (12); an internal combustion engine (22) carried by the frame (12); and an exhaust system (200) connected to the internal combustion engine (22). The exhaust system (200) comprises a first exhaust pipe portion (202) connected to an exhaust port of the internal combustion engine (22), a first catalytic converter channel portion (204), an intermediate channel portion (250), a second catalytic converter channel portion (260), and a second exhaust pipe (268). The first catalytic converter channel portion (204) includes catalytic substrate in a first density, and the second catalytic converter channel portion (260) includes catalytic substrate in a second density. The first catalytic converter channel portion (204) is at an angle with respect to the second catalytic converter channel portion (260).

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))
- in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE