

CORRECTED VERSION

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
15 July 2010 (15.07.2010)(10) International Publication Number
WO 2010/080968 A8(51) International Patent Classification:
C23C 24/10 (2006.01) *C23C 26/02* (2006.01)(21) International Application Number:
PCT/US2010/020455(22) International Filing Date:
8 January 2010 (08.01.2010)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/143,186 8 January 2009 (08.01.2009) US
12/684,241 8 January 2010 (08.01.2010) US(71) Applicant (for all designated States except US): **EATON CORPORATION** [US/US]; 1111 Superior Avenue, Cleveland, OH 44114-2584 (US).(72) Inventors: **KILLIAN, Michael, Lee**; 3972 Kings Point, Troy, MI 48083 (US). **AHMAD, Aquil**; 30643 Sudbury Court, Farmington Hills, MI 48331 (US). **HIGDON, Clifton, Baxter**; 1662 East Melton, Birmingham, MI 48009 (US).(74) Agent: **QUINN LAW GROUP, PLLC**; 39555 Orchard Hill Pl., Ste 520, Novi, MI 48375 (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, 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, RO, RS, RU, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (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, 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))

(48) Date of publication of this corrected version:

17 February 2011

[Continued on next page]

(54) Title: WEAR-RESISTANT COATING SYSTEM AND METHOD

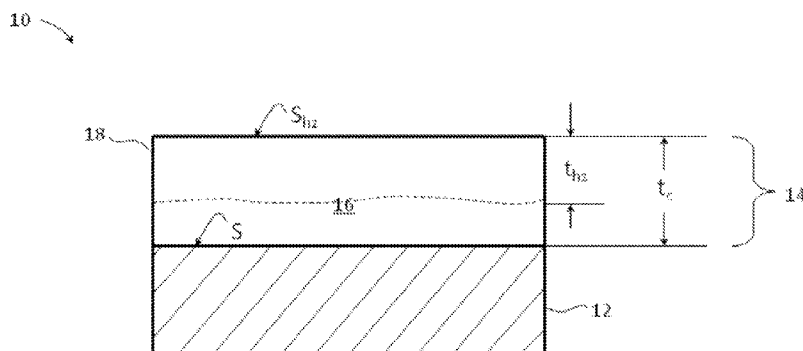


Fig-1

(57) Abstract: A method of forming a wear-resistant coating (14) on a metal substrate (12) includes depositing a metal alloy onto the metal substrate (12) to form a cladding (16), rough finishing the cladding (16) to thereby provide the cladding (16) with an average roughness, R_a , of from about 50 micro-inches to about 150 micro-inches, and work hardening the cladding (16) to thereby form the wear-resistant coating (14) and a hardened zone (18) thereof, wherein the hardened zone (18) has a hardness greater than a hardness of the metal substrate (12). A wear-resistant coating system (10) includes the metal substrate (12) and the wear-resistant coating (14) disposed on the metal substrate (12). The wear-resistant coating (14) is substantially resistant to corrosion from sea water at an ambient temperature of from about -40°C to about 50°C .

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(15) Information about Correction:
see Notice of 17 February 2011