

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
30 October 2008 (30.10.2008)

PCT

(10) International Publication Number
WO 2008/130809 A1

(51) International Patent Classification:

G01N 17/00 (2006.01) *G01N 31/00* (2006.01)

(21) International Application Number:

PCT/US2008/059195

(22) International Filing Date: 3 April 2008 (03.04.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

11/736,819 18 April 2007 (18.04.2007) US

11/934,815 5 November 2007 (05.11.2007) US

(71) Applicant (for all designated States except US): **GENERAL ELECTRIC COMPANY** [US/US]; 1 River Road, Schenectady, NY 12345 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **VACHHANI, Pramod** [IN/IN]; A3, P & t Officers Quarters, Opposite Chinmaya Mission Hospital, 80 Feet Road, New Thip-pasandra, Bangalore, Karnataka 560075 (IN). **SHAH, Sunil, Shirish** [IN/IN]; 6A32 Dedar, Sherwood, Bas-vanagar, Bangalore, Karnataka 560037 (IN). **CROSS, Collin, Wade** [US/US]; 14927 Oak Bluff Court, Hous- ton, TX 77070 (US). **TAYALIA, Yatin** [IN/IN]; #207,

Phase I, Prestige Langleigh, ECC Road, Whitefield, Bangalore, Karnataka 560066 (IN). **VORA, Nishith, Pramod** [IN/US]; 116 Tatham Road, Bensalem, PA 19020 (US). **MURTHY, Raghunandan** [CA/IN]; Flat No. 225, Yamuna Apartment, National Games Village Complex, Koramangala, Bangalore, Karnataka 560047 (IN).

(74) Agents: **TOOP, Barbara, A.** et al.; General Electric Com- pany, Global Patent Operation, 187 Danbury Road, Suite 204, Wilton, CT 06897 (US).

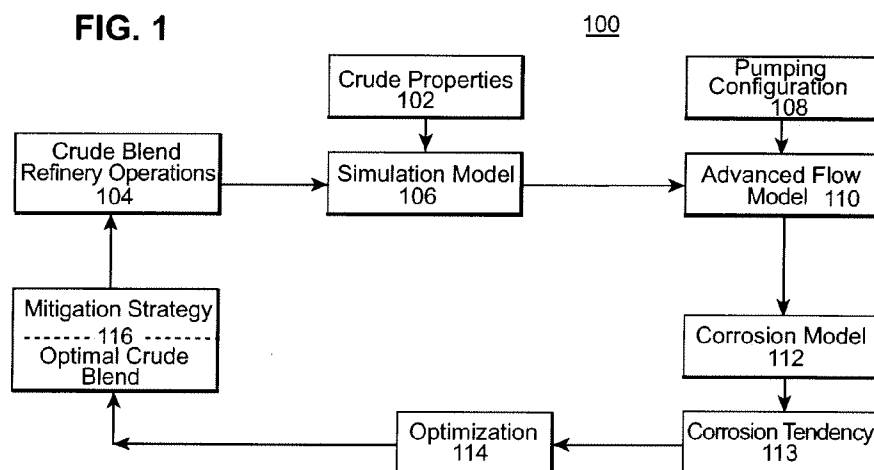
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, 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,

[Continued on next page]

(54) Title: CORROSION ASSESSMENT METHOD AND SYSTEM

FIG. 1



(57) Abstract: A method includes assessing corrosion in a refinery operation having a piping network. Assessing can include identifying in a petroleum sample a presence and an amount of a species determined to be potentially corrosive to corrodible equipment in a refinery. A corrosion risk presented by the presence, the amount, and the boiling point of the species is determined. And, the corrosion risk is evaluated in view of piping network information. A system for implementing the method is provided, also.

WO 2008/130809 A1



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, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, 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))*

- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*