

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
18 January 2007 (18.01.2007)

PCT

(10) International Publication Number
WO 2007/008787 A3

(51) International Patent Classification:
G01N 21/53 (2006.01)

(21) International Application Number:

PCT/US2006/026720

(22) International Filing Date: 10 July 2006 (10.07.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

11/178,846 11 July 2005 (11.07.2005) US

11/456,128 7 July 2006 (07.07.2006) 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): **LASIUK, Brian, W.** [CA/US]; 27126 Pine Crossing Drive, Spring, TX 77373 (US). **VANHOVE, Andre** [BE/BE]; Kruisdijklaan 20, B-9120 Beveren (BE). **CODELLA, Peter, J.** [US/US]; 2327 Brookshire Drive, Niskayuna, NY 12309 (US). **PARKER, Wiley, L.** [US/US]; 102 Pine Manor Drive, Conroe, TX 77385 (US). **MORRIS, Tiffany, N.** [US/US]; 2013 Bywater Court, League City, TX 77573 (US). **GO-LIASZEWSKI, Alan, E.** [US/US]; 19 Postvine Court,

The Woodlands, TX 77381 (US). **VINCIGUERRA, Donato** [IT/IT]; Viale J.F. Kennedy Nro.20, I-CP:04100 Latina (IT).

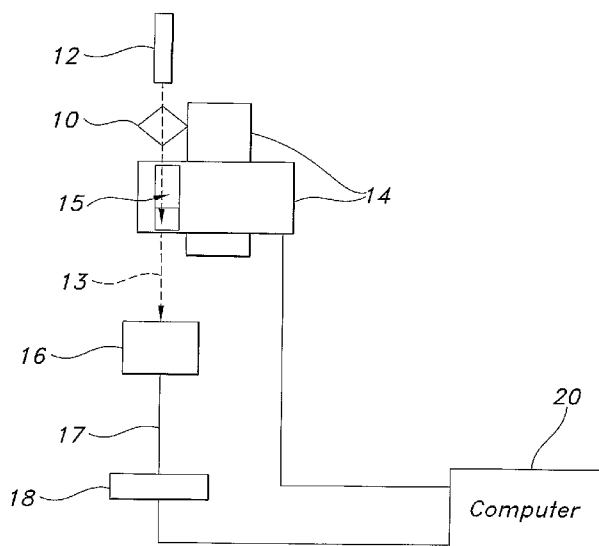
(74) Agents: **PEACOCK, Bruce, E.** et al.; WEGMAN, HESSLER & VANDERBURG, SUITE 200, 6055 Rockside Woods Boulevard, Cleveland, OH 44131 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, 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, 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, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: APPLICATION OF VISBREAKER ANALYSIS TOOLS TO OPTIMIZE PERFORMANCE



(57) Abstract: A system and method for quantifying opaque inhomogeneities within a fluid sample. The system uses an optical lens system (10, 200) to focus a light beam (13, 100) onto a stage (14, 104) where the sample (120) is introduced. The light beam (13, 100) is directed onto the sample in a pattern such that the intensity of transmitted light is measured as a function of path length. A photo detector (16) measures the transmitted light through the sample. Fluctuations in transmitted light intensity are then correlated with detection of opaque inclusions in the sample. The system also includes an automated program which utilizes these optical concentration measurements to determine the fouling potential of visbroken tars and optionally the peptization value (PV), and regulates the introduction of chemical inhibitors into a visbreaker unit to improve the yield or quality of light streams and/or the economic value of product.

WO 2007/008787 A3



Published:

— with international search report

(88) Date of publication of the international search report:

21 June 2007

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.