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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
2 July 2009 (02.07.2009)

PCT

(10) International Publication Number
WO 2009/082501 A1

(51) International Patent Classification:
C22C 38/02 (2006.01) *C22C 38/52* (2006.01)
C22C 38/42 (2006.01) *C22C 38/58* (2006.01)
C22C 38/44 (2006.01)

(21) International Application Number:
PCT/US2008/054945

(22) International Filing Date:
26 February 2008 (26.02.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/015,338 20 December 2007 (20.12.2007) US

(71) Applicant *(for all designated States except US)*: **ATI PROPERTIES, INC.** [US/US]; 1600 N.E. Old Salem Road, Albany, OR 97321 (US).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **BERGSTROM, David S.** [US/US]; 4809 Bayfield Road, Allison Park, PA 15101 (US). **RAKOWSKI, James M.** [US/US]; 4603 Woodlake Drive, Allison Park, PA 15101 (US). **STINNER, Charles P.** [US/US]; 360 Manor Road, Wexford, PA 15090 (US). **DUNN, John J.** [US/US]; 122 Lincoln Drive, Sarver, PA 16055 (US). **GRUBB, John F.** [US/US]; 3114 Wentworth Drive, Lower Burrell, PA 15068 (US).

(74) Agent: **VICCARO, Patrick, J.**; 1000 Six PPG Place, Pittsburgh, PA 15222 (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, 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).

Published:
— *with international search report*

WO 2009/082501 A1

(54) Title: CORROSION RESISTANT LEAN AUSTENITIC STAINLESS STEEL

(57) Abstract: An austenitic stainless steel composition having low nickel and molybdenum and exhibiting high corrosion resistance and good formability. The austenitic stainless steel includes, in weight %, up to 0.20 C, 2.0-6.0 Mn, up to 2.0 Si, 16.0-23.0 Cr, 5.0-7.0 Ni, up to 3.0 Mo, up to 3.0 Cu, 0.1-0.35 N, up to 4.0 W, up to 0.01 B, up to 1.0 Co, iron and impurities. The austenitic stainless steel has a ferrite number less than 11 and an MD30 value less than -10°C.