



(51) International Patent Classification:

H01L 21/67 (2006.01) *G01J 5/10* (2006.01)
G01J 5/00 (2006.01) *H05B 3/00* (2006.01)

(21) International Application Number:

PCT/US2021/019429

(22) International Filing Date:

24 February 2021 (24.02.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/983,064 28 February 2020 (28.02.2020) US

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(54) Title: TRANSMISSION-BASED TEMPERATURE MEASUREMENT OF A WORKPIECE IN A THERMAL PROCESSING SYSTEM

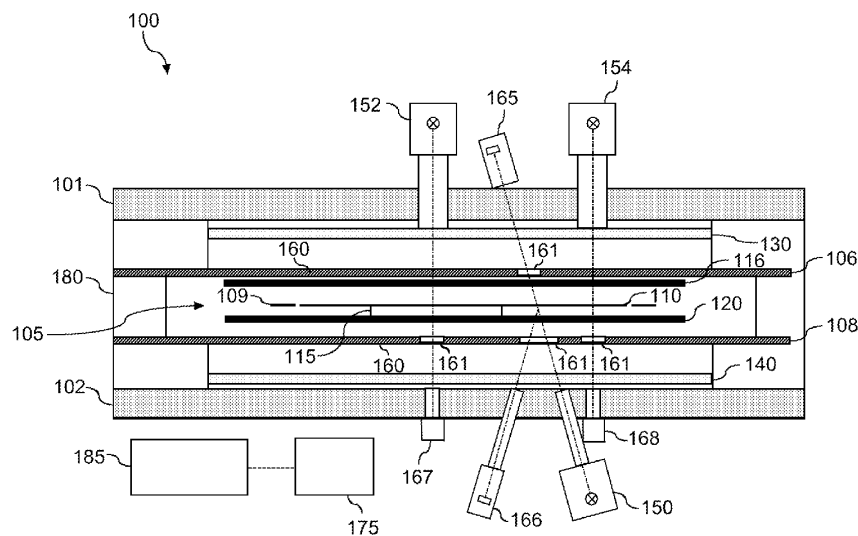


FIG. 1

(57) Abstract: A thermal processing system for performing thermal processing can include a workpiece support plate configured to support a workpiece and heat source(s) configured to heat the workpiece. The thermal processing system can include window(s) having transparent region(s) that are transparent to electromagnetic radiation within a measurement wavelength range and opaque region(s) that are opaque to electromagnetic radiation within a portion of the measurement wavelength range. A temperature measurement system can include a plurality of infrared emitters configured to emit infrared radiation and a plurality of infrared sensors configured to measure infrared radiation within the measurement wavelength range where the transparent region(s) are at least partially within a field of view the infrared sensors. A controller can be configured to perform operations including obtaining transmittance and reflectance measurements associated with the workpiece and determining, based on the measurements, a temperature of the workpiece less than

[Continued on next page]

(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, IT, 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, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, 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).

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))