



(51) International Patent Classification:
F28F 7/00 (2006.01)

(21) International Application Number:
PCT/US2010/039949

(22) International Filing Date:
25 June 2010 (25.06.2010)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
12/502,561 14 July 2009 (14.07.2009) US

(71) Applicant (for all designated States except US): **SPECIALTY MINERALS (MICHIGAN) INC.** [US/US]; 30600 Telegraph Road, Bingham Farms, MI 48025 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **LEMAK, Richard, J.** [US/US]; 6039 Tamarack Drive, Allentown, PA 18104 (US). **MOSKAITIS, Robert, J.** [US/US]; 302 Ramblewood Drive, Easton, PA 18040 (US). **PICKRELL, David** [US/US]; 2591 Clyde Avenue, State College, PA 16801 (US).

(74) Agent: **JESSEN, Derek, S.**; Minerals Technologies Inc., 1 Highland Avenue, Bethlehem, PA 18017 (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, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, 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))

(54) Title: ANISOTROPIC THERMAL CONDUCTION ELEMENT AND MANUFACTURING METHOD

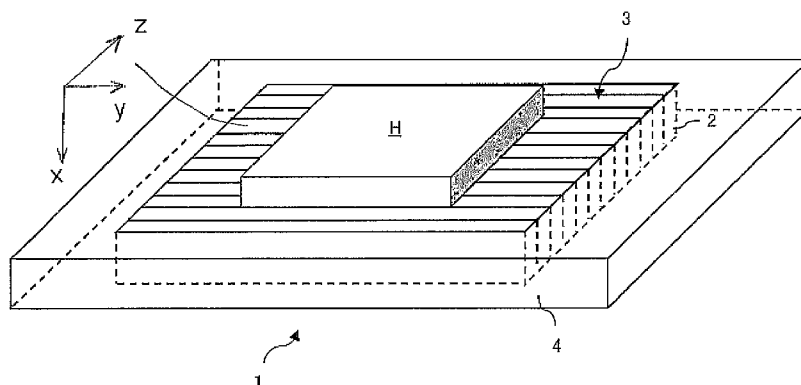


FIG. 1

(57) Abstract: An anisotropic thermal conductive element that can conduct heat from a thermal source with high efficiency in the thickness direction which maintaining strength and a method of making the element. To achieve the above, an anisotropic thermal conductive element that can conduct heat from a heat source, a structure with a stack of graphite sheets having a contact surface across the thickness direction of the graphite sheets, and the stack of graphite sheets has the surroundings thereof coated to form a support parts. The coating process covers the structure of stacked graphite with a support part. A cutting process can be performed by cutting along the surface in the stacking direction after the coating process. After the cutting process, a surface treatment process can make a surface treatment to a section.

