

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
24 April 2025 (24.04.2025)



(10) International Publication Number
WO 2025/085106 A3

(51) International Patent Classification:
F42C 19/08 (2006.01) *F42B 5/16* (2006.01)
C06B 45/12 (2006.01)

(21) International Application Number:
PCT/US2024/026858

(22) International Filing Date:
29 April 2024 (29.04.2024)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/462,995 29 April 2023 (29.04.2023) US

(71) Applicant: SPECTRE PRIMER TECHNOLOGIES,
INC. [US/US]; 2875 Palm Bay Rd., Suite 160 #6, Palm Bay,
Florida 32905 (US).

(72) Inventor: YATES, Daniel; 823 Chickasaw Ave., Mel-
bourne, Florida 32935 (US).

(74) Agent: LANG, William; 309 College Ave., Suite B,
Beaver, Pennsylvania 15009 (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, BN, BR, BW, BY, BZ,
CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG,
KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY,
MA, MD, MG, MK, MN, MU, 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, CV,
GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, 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,

(54) Title: FUZZY INTERFACE LAYER FOR THERMITE AND PRIMER MADE FROM THERMITE WITH FUZZY LAYER

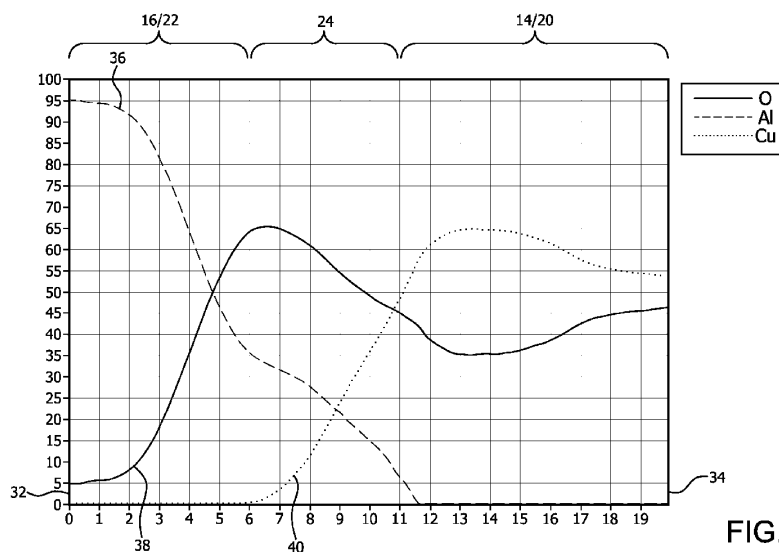


FIG. 7

(57) Abstract: A layered thermite composite includes alternating layers of metal oxide and reducing metal deposited upon a substrate. A fuzzy interface layer between each metal oxide layer and reducing metal layer includes reducing metal, reducing metal oxide, and metal oxide at least partially intermixed therein. The fuzzy interface layer forms while moving between chambers in a multi-chamber deposition process which minimizes exposure of the reducing metal to oxygen while moving between chambers. The fuzzy interface layer is not expected to grow in thickness after deposition. The combination of the relative thinness of the fuzzy interface layer as well as the presence of reactants as well as reducing metal oxide maintains the sensitivity of the layered thermite structure to mechanical ignition if the structure is used within a primer.

[Continued on next page]

LU, LV, MC, ME, 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))*

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

05 June 2025 (05.06.2025)