

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
19 September 2024 (19.09.2024)



(10) International Publication Number
WO 2024/191308 A1

(51) International Patent Classification:

C04B 41/50 (2006.01) *C04B 28/16* (2006.01)
B28B 1/52 (2006.01) *C04B 41/00* (2006.01)
B28B 19/00 (2006.01) *C04B 41/45* (2006.01)
B32B 1/08 (2006.01) *C04B 41/52* (2006.01)
B32B 7/08 (2019.01) *C04B 111/00* (2006.01)
B32B 13/02 (2006.01) *C04B 111/34* (2006.01)
B32B 13/04 (2006.01)

(21) International Application Number:

PCT/NZ2023/050086

(22) International Filing Date:

29 August 2023 (29.08.2023)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2023900651 10 March 2023 (10.03.2023) AU

(71) Applicant (for SL only): **SAMUEL ZHI YI TING**
[NZ/NZ]; c/o AJ PARK, Level 22, Aon Centre, 1 Willis
Street, Wellington, 6011 (NZ).

(72) Inventor; and

(71) Applicant: **SO, Chung Wai** [CN/CN]; 9/F, Block B-2, Vil-
la Monte Rosa, 41A Stubbs Road, Hong Kong, Hong Kong
(CN).

(74) Agent: **AJ PARK**; Level 22, Aon Centre, 1 Willis Street,
Wellington (NZ).

(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,
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).

(54) Title: MULTI-LAYERED CEMENTITIOUS COMPOSITION PREFABRICATED PRISMATIC MEMBER

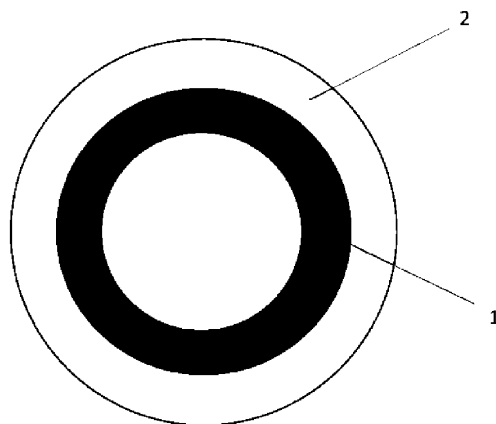


FIGURE 1

(57) Abstract: The present invention relates to a multi-layered composite member comprising a cementitious layer that expands when cured. The composite member comprises an inner layer comprising a first cementitious material and an outer layer, wherein the inner layer at substantially covers an inner surface of the outer layer and the first cementitious material is an expansive material that exerts a force against the inner surface of the outer layer. The invention also relates to the preparation of the composite member and use of the composite member, e.g., as a pipeline or building component.

[Continued on next page]



WO 2024/191308 A1

Published:

- *with international search report (Art. 21(3))*
- *in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE*