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(21) International Application Number: PCT/AU95/00640 (22) International Filing Date: 28 September 1995 (28.09.95) (30) Priority Data: PM 8889 19 October 1994 (19.10.94) AU (71) Applicant (for all designated States except US): THE UNIVERSITY OF SYDNEY [AU/AU]; Parramatta Road, Sydney, NSW 2006 (AU). (72) Inventors; and (75) Inventors/Applicants (for US only): COLLINS, Richard, Edward [AU/AU]; 135 Cudgegong Road, Riverstone, NSW 2765 (AU). TANG, Jian-Zheng [AU/AU]; 19/59-61 Neil Street, Merrylands, NSW 2160 (AU). (74) Agent: GRIFFITH HACK & CO.; G.P.O. Box 4164, Sydney, NSW 2001 (AU).			(81) Designated States: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT, UA, UG, US, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG), ARIPO patent (KE, MW, SD, SZ, UG). Published With international search report.

(54) Title: DESIGN IMPROVEMENTS TO VACUUM GLAZING

(57) Abstract

Vacuum glazings and methods of manufacture thereof are described; the glazings provide improved shear stress resistance in that the vacuum glazing comprises two sheets of glass (2, 3), hermetically sealed around the edge (4), with a thermally insulating internal vacuum, and an array of support pillars (5) placed between the glass sheets (2, 3), wherein the pillars (5) consist of a core (13), made of a material of higher compressive strength, with at least one end covered by a layer of softer material (14). Alternatively, the vacuum glazing comprises two sheets of glass (2, 3), hermetically sealed around the edge (4), with a thermally insulating vacuum, and an array of support pillars (5) placed between the glass sheets (2, 3), wherein the array includes a small number of fused solder glass pillars located over the surface of the glazing, between pillars of higher compressive strength. Advantageously the support pillars (5) comprise two flat parallel ends (15, 16) shaped to provide stable equilibrium, and sides (17) shaped to provide unstable equilibrium, to ensure that the pillars when placed on a glass sheet will fall onto one of the flat faces (15, 16) and thereafter lie on that face.

