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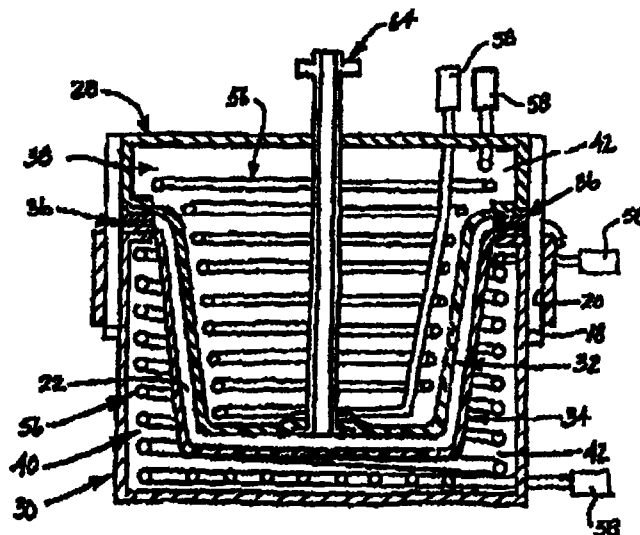
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| <p>(21) International Application Number: <b>PCT/IB97/01107</b></p> <p>(22) International Filing Date: 15 September 1997 (15.09.97)</p> <p>(30) Priority Data:<br/>08/715,533 18 September 1996 (18.09.96) US</p> <p>(71)(72) Applicant and Inventor: <b>McCOLLUM, Robert, P.</b><br/>[US/US]; 34 Linda Drive, Transfer, PA 16150 (US).</p> <p>(74) Agent: <b>RINES, Robert, Harvey; MacLeod &amp; Co., Bledington</b><br/>Grounds, Bledington, Gloucestershire OX7 6XL (GB).</p> | <p>(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, 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).</p> <p><b>Published</b><br/><i>With international search report.<br/>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i></p> |                                                                                                                            |

(54) Title: APPARATUS FOR MOLDING COMPOSITE ARTICLES



(57) Abstract

An apparatus for molding composite articles includes a pair of opposed matched-tool mold sections, each having a rigid housing (28, 30) and a thin, semi-rigid membrane (32, 34) removably and sealably mounted on the housing so as to define a fluid-tight chamber (38, 40) therein. The chamber of each mold section is filled with a noncompressible heat-conductive fluid (42) to provide fluid backing to the portions of each membrane defining the molding surfaces of each mold section (14, 16). A system of temperature control coils (56) extending within each chamber are connected to an external heater/chiller unit to permit circulation therethrough of a suitable temperature control fluid, whereby positive control of the temperature of the backing fluid (42) and, correlatively, the molding surfaces of the membranes.