Title (en)

METHOD FOR STRUCTURAL ATTACHMENT OF POLYCARBONATE PLASTIC SHEET TO SUPPORTING STRENGTH MEMBERS AND ASSEMBLY UTILIZING SAME.

Title (de)

VERFAHREN ZUR BELASTBAREN VERBINDUNG VON POLYCARBONAT-KUNSTSTOFFSCHICHTEN MIT TRAGENDEN ELEMENTEN UND AUFBAU BEI DEM DAS VERFAHREN ANWENDUNG FINDET.

Title (fr)

PROCEDE DE FIXATION STRUCTURELLE DE PLAQUES DE PLASTIQUE POLYCARBONATE A DES ELEMENTS DE RESISTANCE ET ASSEMBLAGE UTILISANT LEDIT PROCEDE.

Publication

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Application

EP 91910458 A 19910521

Priority

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Abstract (en)

[origin: WO9117935A1] In order to be able to utilize polycarbonate sheet material (12) as a structural (i.e. stress-bearing) component in an assembly comprising polycarbonate (12) and metal (10) components, as, for example, in a monocoque air cargo container wherein the polycarbonate sheet material (12) is used as the "skin" of structure, an attachment assembly is utilized to provide a rigid, stress-bearing joint without inducing crack-inducing high levels of localized stress on the polycarbonate sheet (12). The attachment assembly (14) comprises a significant area of overlap between the polycarbonate (12) and metal (10) components, and an attachment strip (14) which substantially covers the attachment area. Rivets or bolts (16) are inserted through oversized holes in the metal (10), polycarbonate (12), attachment strip assembly (14) and then torqued. The compressive forces exerted thereby create the rigid joint (even in an environment where the joint is subject to 180 F+/- temperature cycling such that the different coefficients for thermal expansion for the polycarbonate vs. the metal become significant) but are spread over a sufficiently large area so as to avoid high, localized stress levels which would induce the polycarbonate to crack.

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