

Title (en)

METHOD AND APPARATUS FOR STRUCTURAL ATTACHEMENT OF POLYCARBONATE PLASTIC SHEET TO SUPPORTING STRENGTH MEMBERS AND AIR CARGO CONTAINER UTILIZING SAME

Publication

**EP 0484502 A4 19921119 (EN)**

Application

**EP 91910458 A 19910521**

Priority

- US 9103577 W 19910521
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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.

IPC 1-7

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CPC (source: EP)

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Citation (search report)

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- [Y] DE 8704815 U1 19871203
- [Y] DE 2927587 A1 19810122 - BRUEGGEMANN & BRAND KG
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- See references of WO 9117934A1

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