

Title (en)
COMPOSITE HONEYCOMB SANDWICH STRUCTURE

Title (de)
VERBUND BIENWABEN SANDWICH STRUKTUR

Title (fr)
STRUCTURE COMPOSITE NID D'ABEILLE EN SANDWICH

Publication
EP 0883484 A1 19981216 (EN)

Application
EP 97903737 A 19970106

Priority

- US 9700075 W 19970106
- US 58716096 A 19960111
- US 61690396 A 19960315
- US 62082996 A 19960320

Abstract (en)
[origin: WO9725198A1] We eliminate resin flow into the cells of honeycomb in sandwich structure by using an unsupported film adhesive (108), a barrier layer (110), and a scrim supported adhesive layer (112) between the composite laminate (102) and the core (106). We produce superior panels with lighter weights, improved mechanical properties, and more predictable structural performance by keeping resin in the laminate rather than losing it to the core cells. We reduce core crush and ply wrinkling in composite honeycomb sandwich structure by preventing slipping of tiedown plies relative to the mandrel and to one another during autoclave curing. We produce superior panels with lighter weights, improved mechanical properties, and more predictable structural performance. The method involves applying a film adhesive to the tiedown plies in the margin of the part outside the net trim line. During heating of the autoclave and prior to the application of high pressure to the composite structure, the film adhesive cures to form a strong bond between the plies and to the mandrel. When pressure is applied, the tiedown plies are locked together and to the mandrel to prevent slippage between any layers in the panel.

IPC 1-7
B32B 3/12; **B32B 7/12**

IPC 8 full level
B32B 3/12 (2006.01); **B32B 5/00** (2006.01); **B32B 7/12** (2006.01); **G10K 11/172** (2006.01)

CPC (source: EP)
B32B 3/12 (2013.01); **G10K 11/172** (2013.01); **Y02T 50/40** (2013.01)

Citation (search report)
See references of WO 9725198A1

Designated contracting state (EPC)
DE ES FR GB IT

DOCDB simple family (publication)
WO 9725198 A1 19970717; AU 1822997 A 19970801; CN 1101751 C 20030219; CN 1211947 A 19990324; EP 0883484 A1 19981216; JP 2000502968 A 20000314; JP 2007015385 A 20070125; JP 3913275 B2 20070509; JP 4407964 B2 20100203

DOCDB simple family (application)
US 9700075 W 19970106; AU 1822997 A 19970106; CN 97192447 A 19970106; EP 97903737 A 19970106; JP 2006200715 A 20060724; JP 52529497 A 19970106