US009409348B2

(12) **United States Patent**
Hansen

(10) **Patent No.: US 9,409,348 B2**
(45) **Date of Patent: Aug. 9, 2016**

(54) **FABRICATION OF STIFFENED COMPOSITE PANELS**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 467 days.

(21) Appl. No.: **13/758,505**

(22) Filed: **Feb. 4, 2013**

(65) **Prior Publication Data**

US 2014/0374013 A1 Dec. 25, 2014

(51) **Int. Cl.**

B29C 65/00	(2006.01)
B32B 37/00	(2006.01)
B29C 70/30	(2006.01)
B29C 33/30	(2006.01)

(52) **U.S. Cl.**

CPC ***B29C 70/30*** (2013.01); ***B29C 33/301*** (2013.01); ***B29C 33/307*** (2013.01)

(58) **Field of Classification Search**

CPC .. B29C 65/00; B29C 66/00145; B32B 37/00; B32B 37/10

See application file for complete search history.

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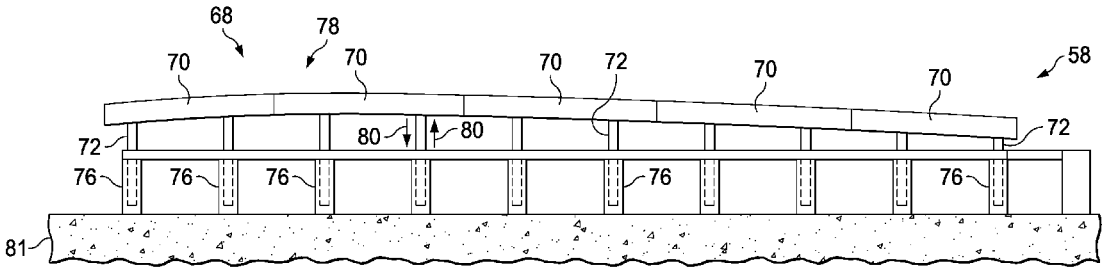
(57) **ABSTRACT**

A stiffened composite panel is fabricated using modular tooling. Composite pre-preg is laid up and formed over forming block modules each of which is assembled by co-linearly arranging a plurality of forming block segments. The formed stiffeners are respectively transferred to individual cure tool modules that are assembled by co-linearly arranging a plurality of cure tool module segments. The stiffeners are assembled by arranging the cure tool modules side-by-side, and a composite skin is placed on the assembled stiffeners. The panel is vacuum bagged using a segmented vacuum bag.

18 Claims, 26 Drawing Sheets