

Title (en)

Fail-safe composite-cast metal structure and method.

Title (de)

Verfahren zur Herstellung einer ausfallsicheren verbundgegossenen Metallstruktur.

Title (fr)

Procédé pour la fabrication d'une structure en métal à sûreté intégrée coulée composite.

Publication

EP 0605915 A2 19940713 (EN)

Application

EP 93203492 A 19931213

Priority

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Abstract (en)

A method for manufacturing a structural component (100) includes forming a groove (104) in an outer surface of a fibre-reinforced body (102). Molten metal is introduced to an exposed surface of the groove (104) and to a predetermined portion of the outer surface of the body (102). The cast metal (106) is cooled in a controlled manner to thermally alter sufficient resin (103) in the body (102) so as to create a secure interconnection of the cast metal (106) on the body (102). The cast metal (106) adjacent the groove (104) is sized so that it will fail prior to separation of the cast metal (106) from the body (102) under excessive tensile loads. A portion (108A) of the cast metal (106) remains on the body (102) so that elongation of the component significantly exceeds ultimate elongation of the fibre-reinforced body (102) and the cast metal (106). <IMAGE>

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