

# Effective approach to reduce scrap and processing problems during the manufacturing of complex Prepreg parts

# Membrane using for Prepreg applications

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Complex CFRP Prepreg parts produced by tape laying will have a high risk of scrap and rework cost

Typical problems are local delaminating, porosity, dry area's, hot spots i.e..

To find a simple approach to reduce these risks will deliver an international competition bonus to the product

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## Solution:

Use an additional Multi Membrane MM similar to peel ply during the vacuum bagging and curing to vent and degases the laminate and in this way you will reduce porosity risks.

The handling and the additional cost will be low compare to the effects in cost savings and quality results

The key to handle this material in Prepreg structure processing is our special Know How.

The material will delivered by a international world class company located in Austria with reference from Europe and Asia

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### Quick and dirty cost comparison:

A typical price range to produce 1 ft<sup>2</sup> CFRP structure with a typical thickness of about 0,15 inch will be incl. material, profit etc. in the range of 300 to 400 \$ (series production rates)

The add. cost to use this new membrane incl. material price is in the range of 1.0 to 1.5 \$ per ft<sup>2</sup>.

Cost of rework of this kind of structure without this material is f. e. in the range of 5 – 10 %, 15 to 30 \$ per ft<sup>2</sup>.

If possible to reduce only this rework to less than 3 %, you can find a range of benefit from 5 up to 20 \$ per ft<sup>2</sup>

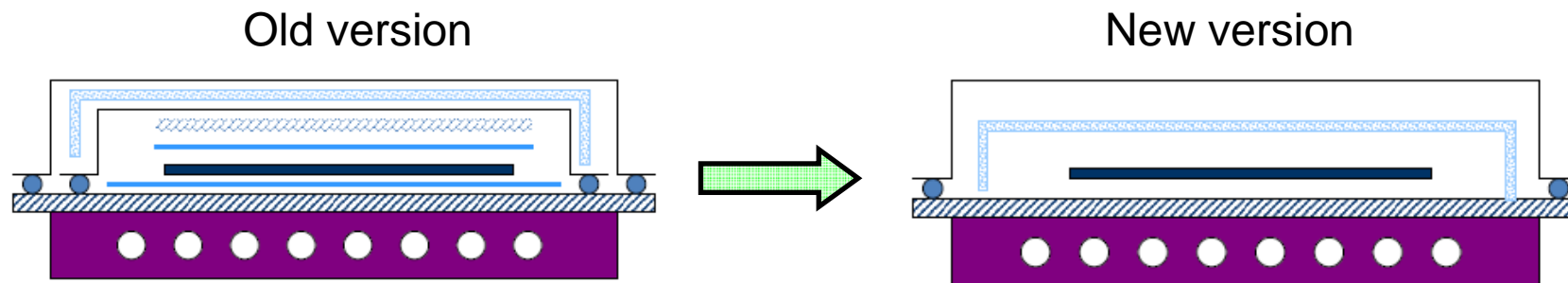
The savings compare to the old version including the additional material price is in the 4 \$ to 18 \$ per ft<sup>2</sup>

**For civil fuselage structure with the length of 40 ft and a surface in the range of 1800 ft<sup>2</sup>, so we can find a net additional profit of 7.200.- – 30.000.- \$ per structure or in the range of up to 10 % of the target structure price**

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## What to do:

- a) Use the special Multi Membrane (MM) in the Prepreg process
- b) Change the vacuum bagging
- c) Change venting method
- d) Change cure cycle



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Feel free to contact us for more details

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