Notes on Testing

29 Oct 2023

Product testing was performed with the weakest likely variation of core, the thinnest available skin, and the worst-case application of adhesive.

The rigidity of complete panels was very consistent between samples of the same materials, indicating good predictability. The panels made with different skin materials was very similar, which is expected, given that the skins are stiff and the core more flexible - deflection is mostly a function of stressing the core.

The mode of failure in-plane and out-of-plane was governed by the properties of the core. While the ultimate load capacity of panels made with variations of skin types and thickness was notable, the structural use of the panels is within a low proportion of the panel capacity, and is thus governed by stiffness rather than capacity.

With regards to bracing, because all of the selected skin types are very stiff, the bracing capacity is almost completely determined by the hold-down capacity. Switching the skins made only minor differences.

Note also that there is a very linear relationship between stiffness and thickness that should give confidence with interpolation and extrapolation of the data points.

The testing was completed by Scion under contract from SIPS Direct Ltd. I confirm that Supersub has the legal right to use the test data.

Rod Yeoman

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Director, SIPS Direct Ltd