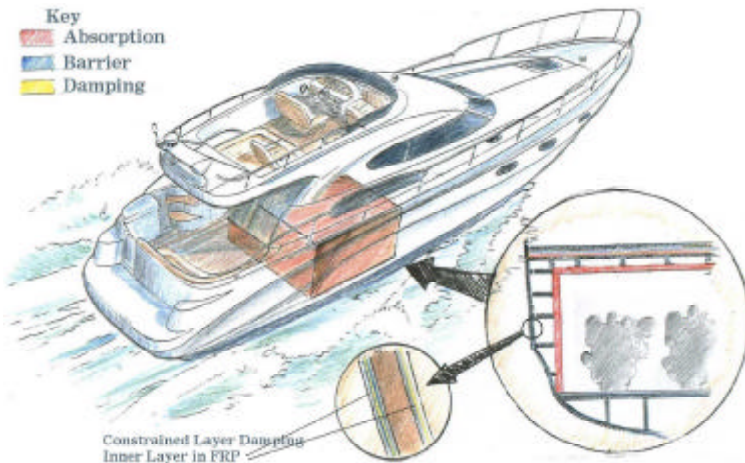


PDP Constrained Layer Damping Foil for FRP

Phone: 937-438-1100 * Fax 937-438-2190



There is a trend today of using more and more composite materials in structures to reduce weight. Sandwich panels constructed with honeycomb cores or cores of rigid plastic foam or balsa wood and glass reinforced plastic skins have been successfully used to build ships as large as minesweepers.

American Acoustical Products has adapted its time proven technology and experience in manufacturing MPM Noiseless Metal for damping metal fabrications, to produce PDP a self-contained viscoelastic layer that can be incorporated into FRP.

PDP is light in weight and the viscoelastic layer has been optimized to raise the typical sandwich panel's loss factor to 5 to 10 times over a wide frequency range.

Typical Properties

- Weight** Approximately ¼ oz/ft²
 (160 grams/m²)
- Thickness** 0.006" (150µm)
- Temperature Resistance** -40°F to 250°F (-40°C to 120°C)
- Fire Resistance** The material is designed to be totally encapsulated by the FRP and thus the fire resistance depends on the characteristics of the reinforced resin

Acoustic Performance See below

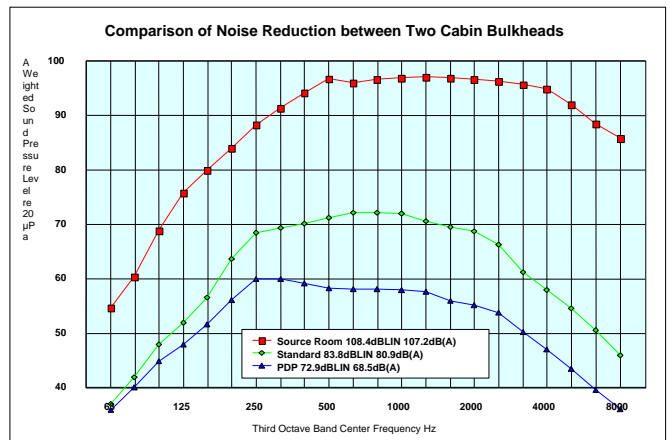


Figure 2 Improvement by Constrained Layer Damping in Noise Reduction between two Cabins

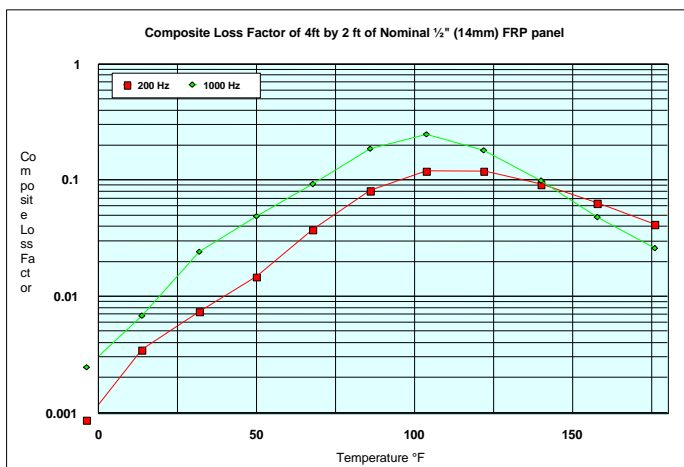


Figure 1 Loss Factor of FRP panel vs. Temperature

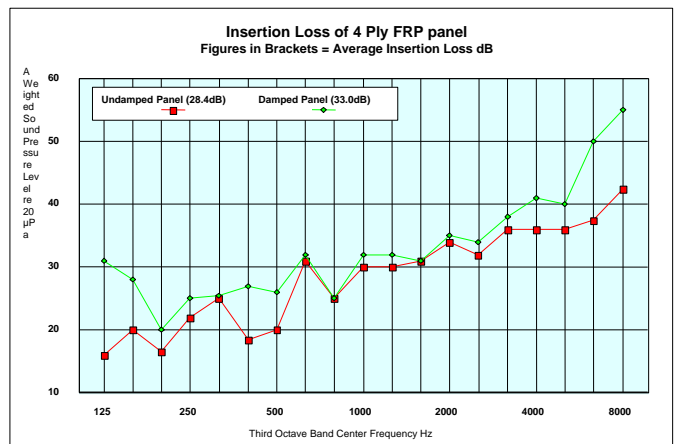


Figure 3 Transmission Loss of a 4 Ply FRP panel 1ft by 1ft (310mm by 310mm)