



Polymer Composites as Construction Materials

Application Summary Sheet 22

Title: Small Building Structures

Target Audience: Structural Engineers, Suppliers, Composite Manufacturers, Construction Professionals

Keywords: Durability, Light weight, Insulation, Modular construction, Polymer composites

Overview of application / summary:

The flexibility of FRP materials has allowed them to be utilised for innovative structural developments. The ability to combine them with conventional building materials has major benefits; shapes and forms that cannot be formed with individual materials are possible.

The main structural use of FRPs is in synergy with other more conventional materials to provide innovative solutions whilst maintaining structural integrity and cost effectiveness. The superior durability and corrosion resistant properties implies that structure owners will not be inconvenienced with maintenance requirements as frequently as with other materials, thus minimising disruption and associated costs.

Transportation, installation and safety benefits prevail with the use of FRP composite structural elements. Pre-fabrication is possible, minimising site assembly and installation time, lighter components are cheaper to transport and safer to operate with on site.

Architects are presented with greater freedom with the availability of composite materials, and new structures can gain social acceptance more easily - they are not of dull appearance.

Impact of application

Engineering:

Financial:

Environmental:

Social

Robustness of research

Prepared by BRE and Trend 2000 Ltd (Partners in Innovation Project)
For further information please consult the project website:

www.polymercomposites.co.uk

Future developments

Where to get further information

Companies

Articles