OWENS CORNING®
INNOVATIONS FOR LIVING®

CASE STUDY

Cem-FIL® AR Glass Reinforcements Help Fibre Net Catch Attention and Revenue

Lightweight, easy-to-handle fiber-reinforced polymer nets reinforcing concrete used to restore historic buildings

Application

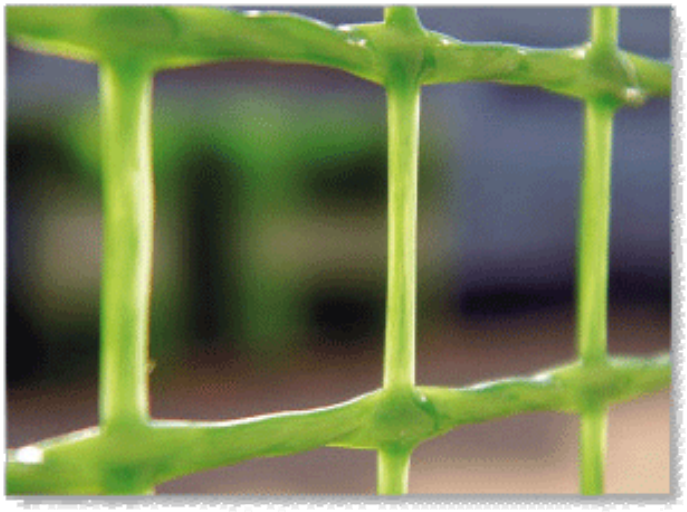
- Lightweight easy-to-handle FRP mesh or netting to replace steel in reinforced concrete

Fabrication Process

- Fibers are pre-tensioned and impregnated with epoxy-vinyl ester resin and woven with multiple twisted warp and flat weft strands embedded between warp strands

Reinforcement

- Direct single-end roving
- Cem-FIL® alkali-resistant glass
- 5326 2400 Tex



The area where Fibre Net S.r.l. is headquartered in the northeast of Italy has been inhabited since the Neolithic age some 5,000 years ago. Perhaps living in such an environment prompted the company's founders to develop composite products for restoring the country's historic architecture and infrastructure.

After many years of success making pultruded shapes that upgrade aging structures both statically and seismically, the company's technical team developed another composite product that is now generating increased attention and revenue – fiber-reinforced polymer (FRP) mesh or nets for reinforcing concrete.

The FRP nets are manufactured with continuous Cem-FIL® alkali-resistant (AR) glass fibers from OCV™ Reinforcements. The fibers are pre-tensioned and impregnated with thermosetting epoxy-vinyl ester resin and woven with multiple twisted warp and flat weft strands embedded between warp strands. The strands average about 3 mm (0.12 inches) in width.

In the restoration and salvage of buildings, FRP nets contribute high mechanical strength, chemical resistance and thermal insulation. They are light and thin enough to enable fast, easy and low-cost installation.

"At the moment, Fibre Net is experiencing a strong growth trend, both in terms of visibility and in terms of turnover," said General Manager Cecilia Zampa.

“This is the result of considerable research and innovation in composite materials for the building sector, and an outcome of our strong activity in ‘training the market’ – making the market more aware of composites in the building sector,” she explained.

Zampa said the company is benefiting from the unique aspects of the mesh product.

“It is similar to traditional consolidating techniques done up to now with steel meshes, but with a lighter and thinner product, FRP mesh is easy to move. It has good properties and meets the technical standards for concrete construction in NTC 14.01.2008.”

Contacts

Fibre Net S.r.l.
Via Zanussi, 311 – Z.I.U.
33100 UDINE – ITALY
+39 0432 600918
info@fibrenet.info

For more about Fibre Net, visit www.fibrenet.it.

For more about Cem-FIL® AR glass fibers, visit www.ocvreinforcements.com/CemFIL.

OWENS CORNING
COMPOSITE MATERIALS, LLC
ONE OWENS CORNING PARKWAY
TOLEDO, OHIO 43659
1.800.GET.PINK™
www.owenscorning.com
www.ocvreinforcements.com

EUROPEAN OWENS CORNING
FIBERGLAS, SPRL.
166, CHAUSSÉE DE LA HULPE
B-1170 BRUSSELS
BELGIUM
+32.2.674.82.11

OWENS CORNING – OCV ASIA PACIFIC
SHANGHAI REGIONAL HEADQUARTERS
OLIVE L.V.O. MANSION, 2ND FLOOR
620 HUASHAN ROAD
SHANGHAI 200040
CHINA
+86.21.62489922

This information and data contained herein is offered solely as a guide in the selection of a reinforcement. The information contained in this publication is based on actual laboratory data and field test experience. We believe this information to be reliable, but do not guarantee its applicability to the user's process or assume any responsibility or liability arising out of its use or performance. The user agrees to be responsible for thoroughly testing any application to determine its suitability before committing to production. It is important for the user to determine the properties of its own commercial compounds when using this or any other reinforcement. Because of numerous factors affecting results, we make no warranty of any kind, express or implied, including those of merchantability and fitness for a particular purpose. Statements in this publication shall not be construed as representations or warranties or as inducements to infringe any patent or violate any law safety code or insurance regulation.

Pub. Number 10013095 Owens Corning reserves the right to modify this document without prior notice. © 2010 Owens Corning.