New PipeStrand™ filament winding products offer significant performance, material savings and higher productivity

Filament winding is the largest reinforcement market in the world. With a dedicated focus on multiple resin and curing systems, market-leading PipeStrand™ reinforcements from Owens Corning help meet regional differences in customer needs and preferences.

PipeStrand™ new product platform is made with Advantex® boron-free E-CR glass and provides excellent corrosion resistance and increased service life to the filament-wound pipe when installed in the field.

Full suite of products for high and low pressure filament winding

PipeStrand™ S2300 and S2500 single-end rovings are targeting the high pressure and high-performance epoxy filament winding market and show a 7-61 percent improvement over reference products in tested properties.¹ S2300 and S2500 are designed for both amine and anhydride cured epoxies. S2300 delivers best mechanical properties in aromatic amine cured epoxies, while S2500 peaks in anhydride cured epoxies. Both show outstanding hydro-thermal stability under pressurized conditions for long pipe service life (+20 years).

Developed for low pressure filament winding market, PipeStrand™ S1000 single-end roving is compatible with polyester, vinyl ester, epoxy and polyurethane resins, which allows for potentially lower inventory and faster creel changes. Its excellent processing, long-term mechanical and hydrostatic properties provide a major step change over existing products and meet longer service life requirements for pipes, tanks and vessels (+20-50 years)².

Designed for use in chop and spray up methods for pipes and tanks, PipeStrand™ M6000 multi-end roving can be used for large and small diameter, horizontal and vertical surfaces.

Lower resin content for cost-efficiency

The potentially lower resin consumption permits cost-efficient designs with higher glass content. Processors benefit from fast wetting and low fuzz, which can result in significantly increased productivity, reduced downtimes and lower manufacturing costs.

“PipeStrand™ rovings lead the market in critical mechanical properties, processing range and cost efficiency” states Bryan Minges, Global Product Manager at Owens Corning.

Typical applications are found in water distribution, petrochemical, infrastructure, marine transportation and power and energy installations, including refineries and off-shore platforms. To help customers optimize their design and manufacturing processes, Owens Corning offers a unique, epoxy focused Pipe Design and Cost Model App with product selection, material comparison and modeling tools.

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¹ Laboratory sample: Mechanical testing lab | Resin package: Epoxy | Test method: ASTM D5083 (ATS) & ASTM D1599 (Burst) | Test temperature: 200°F (93°C) | Test property: Axial tensile strength and burst stress | Units: ksi
² Owens Corning Lab. sample: Mechanical testing lab | Resin package: Polyester, Vinyl Ester | Test method: ASTM D2344 | Test property: Shear Strength | Units: ksi MPa.