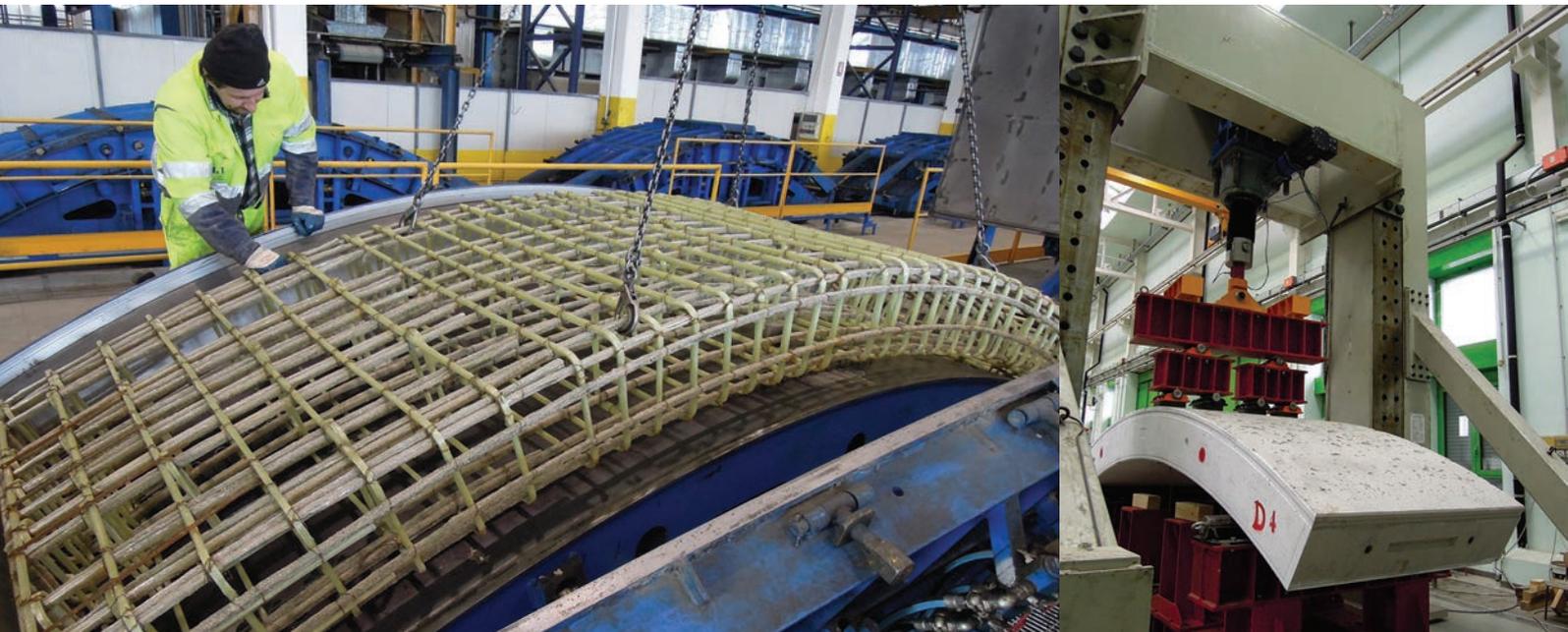


**POWERED BY
COMPOSITES**



GFRP COMPOSITE REBARS REDEFINE THE ART OF TUNNEL LINING



A leading Italian manufacturer of corrosion resistant GFRP solutions for underground civil engineering projects has developed tunnel lining products with precast concrete incorporating glass fiber rebar cages instead of traditional steel reinforcement.

“PulStrand™ single-end roving gives our glass fiber rebar cages the right mechanical properties in terms of flexural strength and interlaminar shear to ensure the same bearing capacity as steel cages, while greatly reducing the thickness of the concrete cover due to their superior resistance to corrosion.”

Aniello Giamundo, General Manager, ATP srl.

ATP srl, in collaboration with the University of Rome, and with support from the EU's Horizon 2000 research and innovation program in a project called COMPOSKE (COMPOSITE SKELETON), developed the new GFRP rebar reinforcing structures specifically targeted at solutions to replace conventional steel rebar in precast tunnel segments.

SAME BEARING CAPACITY AS STEEL CAGES

The pultruded GFRP rebar are manufactured using PulStrand® 4100 single-end roving made from Owens Corning's patented boron-free Advantex® E-CR glass and provides maximum part strength and extended service life in applications facing corrosion. Altogether, this results in extremely durable laminate structures and greater efficiencies throughout the entire value chain.

In contrast to conventional steel reinforcement, the GFRP rebar cages are electrically non-conductive, an instrumental benefit wherever the risk of arc formation must be minimized, such as in metro and

railway tunnels. The first concrete GFRP rebar lining rings have been installed in a metro tunnel under construction in Milan, and further applications include nine tunnels for the high-speed track linking Bologna to Florence.

Contact: composites@owencorning.com
w.owenscorning.com/composites