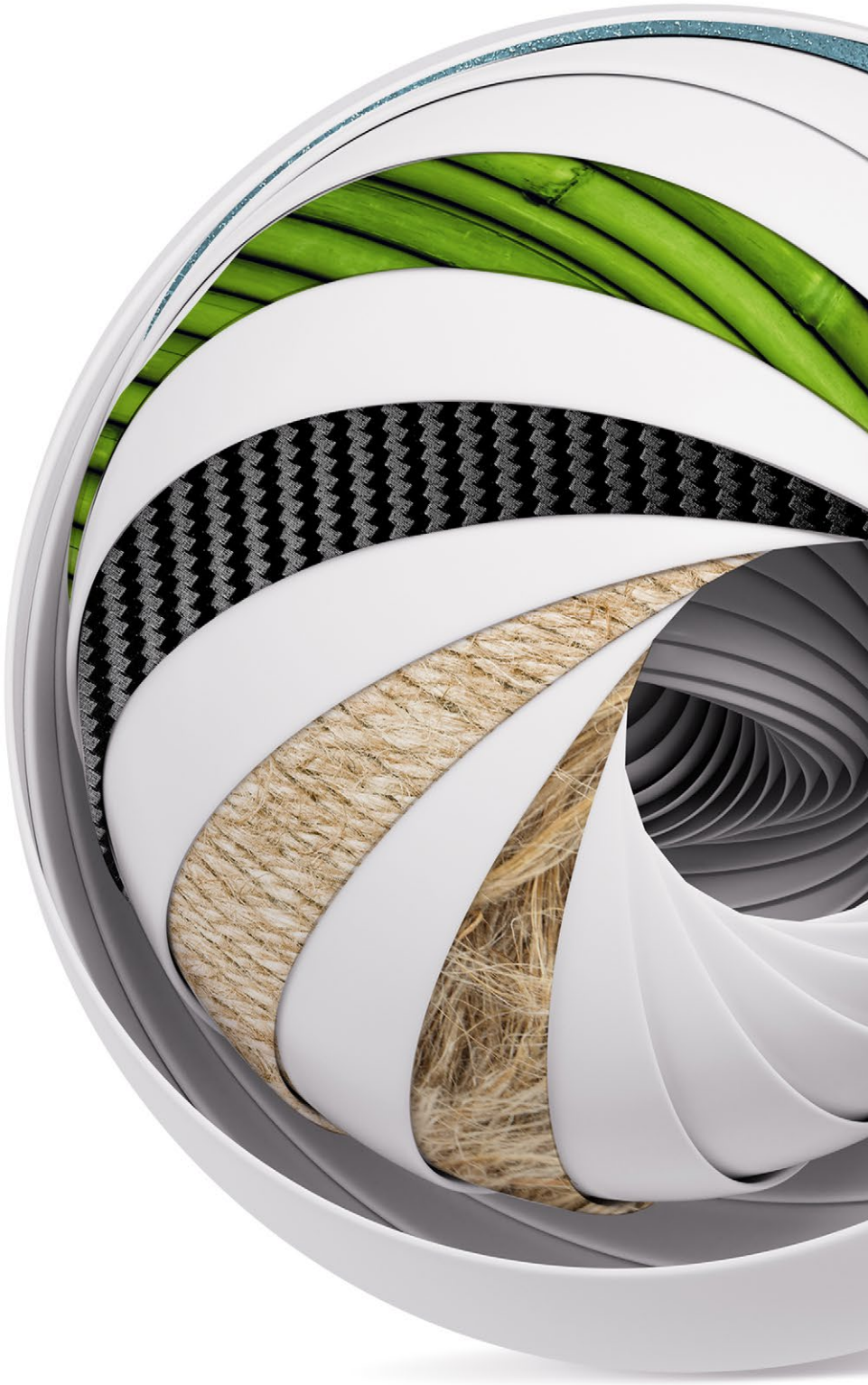
JEC COMPOSITES MAGAZINE

SPECIAL ISSUE

COMPOSITES SUSTAINABILITY REPORT 2023



In partnership with

EuCIA
The European Voice of Composites

Typically, the automotive industry is interested in weight reduction and high volume/low cost solutions. Thermoplastic composites are potential candidates for automotive applications as long as material and processing costs are low. The application of, for example, glass fibre-polypropylene (PP) composites, could meet this need, where manufacturing knowledge from aerospace (e.g. product consolidation, continuous fibre manipulation and welding) could unlock the potential of thermoplastic composite applications in automotive. Vice versa, thermoplastic composites manufacturing requires repetitive and reproducible processing. The automation knowledge from the automotive industry could be of high value for the aerospace sector, which is confronted with increasing production volumes. Potential examples are robot technology, vision and other quality control technologies.

Rightweight is a collaboration of clusters like TPAC in the European Lightweight Clusters Alliance (ELCA). The participants are Karlsruher Institut für Technologie (IPEK) (Germany), Flanders Make (Belgium), Plastipolis – pôle de compétitivité Plasturgie & Composites (France), Cluster NanoMikroWerkstoffePhotonik NMWP Management GmbH (Germany), AutomotiveNL (Netherlands), and distretto sull'Ingegnerio die Materiali polimerici e compositi e STrutture scarl (IMAST) (Italy).

> ***Automation knowledge from the automotive industry could be of high value for the aerospace sector.***

RIGHTWEIGHT focuses on five cross-cutting areas within lightweight:

- materials supply & development
- characterisation & modelling
- design & smart functions
- manufacturing & assembly
- recycling.

Knowledge is shared by the participants in open workshops. Interested companies can obtain a voucher for research projects with one of the research institutes involved.

TPAC: www.thermoplasticcomposites.nl/research-areas/processing/rightweight/

CompositesNL: www.compositesnl.nl

New approaches to solving industry challenges

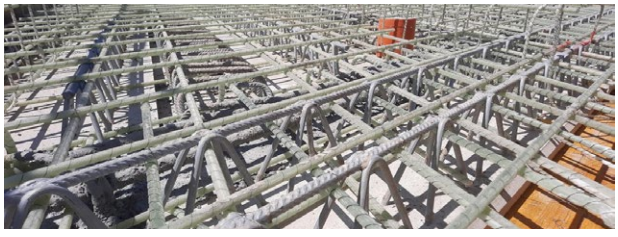
From construction to mobility, advances in composite materials and processing create innovative solutions to improve sustainability.

Italian company Sireg Geotech has been at the forefront of construction innovation since its foundation in 1936. The recent achievement of ETA certification for its GFRP Glasspree® TS rebars for concrete reinforcement emphasises its continued commitment to sustainable practices.

> ***GFRP rebars are renowned for their exceptional corrosion resistance.***

Sireg glass fibre reinforced polymer (GFRP) rebars are renowned for their exceptional corrosion resistance and usher in a new era of construction materials prioritising strength, safety, and environmental awareness. They enable the construction of structures with an expected service life of 100 years, thus substantially reducing the need for continuous maintenance and repair while contributing to long-term sustainability.

The use of composite reinforcing bars makes it possible to overcome the limitations of traditional concrete construction, offering solutions that improve both durability and environmental responsibility. As of today, Sireg Glasspree® TS bars are the only European Technical Assessment (ETA)-certified GFRP rebars available on the market. As part of its corporate mission, Sireg Geotech is dedicated to shaping the future of construction by promoting sustainable and resilient practices.



Glasspree rebar is used in the construction and repair of reinforced concrete structures such as bridges.