

## PRESS RELEASE

***New milestone for the Lombardia based company which manufactures and exports worldwide composite material products for civil engineering and geotechnical applications.***

**Sireg Geotech is the first company in Europe to have obtained the ETA certification on its fiberglass bars for the reinforcement of concrete works: from now on improved safety, sustainability, and benefits for the construction industry.**

*February 27, 2023, Milan* - Sireg is pleased to announce an important national and European accomplishment regarding the voluntary certification for fiberglass products intended for structural restoration and new construction. The Arcore based company, which manufactures and exports to more than 70 countries worldwide its non-metallic and composite products for geotechnical and civil engineering applications, has applied for and obtained the ETA (European Technical Assessment) for its family of fiberglass bars and stirrups for the reinforcement of buildings and for concrete works. Sireg Glasspree® bars represent, to date, the only ETA-certified GFRP (Glass Fiber Reinforced Polymer) composite bars available on the market.

The important achievement - the result of a voluntary and far-sighted action of the company and of the close cooperation with both the Istituto per le Tecnologie delle Costruzioni ITC-CNR and the Politecnico of Milan - represents a strategic step towards the CE marking of this family of fiberglass (GFRP) products. These ones are more durable and more sustainable than steel, and can finally be applied in a safer way, which turns into a benefit to both contractors and the whole construction industry in Italy and Europe.

### **ETA certification process and implications for the construction industry**

Sireg boasts more than 30 years of experience in the manufacturing of fiberglass rods. It's the first company producing composite materials to have highlighted the need for a European certification for this family of products, classified as non-traditional and therefore not covered by any harmonized standards. The aim was to boost their application for structural purposes. As a matter of facts, the NTC 2018 (Technical Standards for Construction) provide for mandatory certification, and Sireg has therefore acted as a forerunner for a safer and more advantageous application of this innovative materials.

In 2019 the company started, in cooperation with ITC-CNR - the Italian TAB (Technical Assessment Body) - the voluntary application for the drafting of the European Assessment Document (EAD), necessary for the CE marking. It thus drew up the European certification protocols where the essential characteristics to be tested and the test methods to be used for product evaluation are defined. Based on these protocols, more than 350 laboratory tests have been carried out to guarantee the mechanical performance and durability of Sireg Glasspree® bars. And finally, at the end of 2022, the ETA was obtained.

Within a context of degradation of the Italian infrastructure, designed and built in the early post-war period, Sireg, has acted in the direction of regulating the use of composite materials in the construction industry by guaranteeing the quality of these products and the consistency of their mechanical performance. The certification process of products that are not within the scope of a harmonized standard is essential to be able to use an alternative construction product in the European Economic Area.

## Features and advantages

Sireg ETA-certified Glasspree® rods are manufactured in different diameters through a process called *pultrusion*, enabling to obtain products with high mechanical properties and durability. Fiberglass plays a dominant role in terms of advantages, due to a combination of chemical-mechanical characteristics that, in relation to cost, make it nowadays the best solution for applications in environments particularly aggressive for common steel reinforcements, such as salty environments, or in the presence of electromagnetic fields or when antifreeze chlorides are used, etc.

The advantages resulting from the use of ETA-certified materials for structural use are manifold and are essential to the proper execution of a work:

- ▶ due to their resistance to corrosion, fiberglass bars embedded in concrete find their ideal application in the construction of bridges, works on the sea, and generally works to be realized in particularly aggressive environments;
- ▶ they provide sustainability and infrastructure durability, double than that of steel, with an expected service life of 100 years and lower maintenance requirements;
- ▶ their weight is one-fourth that of steel, thus allowing for reduced transportation and installation costs;
- ▶ they require less concrete cover and can be used without the addition of admixtures in the concrete or with the new green concretes;
- ▶ the control and inspection activities of the Construction Managers are therefore simplified.

A range of benefits offering the utmost on the sustainability front as well.

The low environmental impact of the concrete structures reinforced with the new composite materials must be mentioned as well.

Sireg invests 5% of its revenue in R&D and pays special attention to the issue of sustainability of both the production processes and the products.

Sireg received numerous awards for its Research & Development activities: in March 2019 Sireg was the winner at the JEC Innovation Awards in Paris in the Constructions & Infrastructure category for the project "Bendable TP composite reinforcements for concrete", in partnership with Arkema, the University of Miami and the National Cooperative Highway Research Program (NCHRP). Also in 2019, the company won the "Best To Brianza" and the "GammaDonna" awards and entered the shortlist of 30 companies selected by Assolombarda for having believed and constantly invested in innovation and showcased (its revolutionary Glasspree® TP rebar out of thermoplastic fiberglass) in the multimedia exhibition "Genio e Impresa. Da Leonardo e Ludovico alle grandi storie di innovazione dei nostri giorni" (July-September 2019) at Palazzo Lombardia in Milan.

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