Stefan Bachstein

New way of thinking

Constant research about fibreglass laminates makes Brianza Plastica a reliable partner to develop leisure vehicles that meet the latest environmental and product trends in the RV market. Its Italian factories are working on product modifications and new developments through a new way of thinking

Words John Rawlings

Brianza Plastica, which has been producing fibreglass laminates in Italy since 1962, started by supplying the construction sector before diversifying into supplying OEMs in the recreational and commercial vehicle sectors from 2006. It is now one of the largest manufacturer of fibreglass laminates in Europe, using both continuous hot (with its product Elyplan) and discontinuous cold technology (with laminates called Elycold). To maintain its position as a leading manufacturer of fibreglass laminates for the RV sector in Europe, Brianza Plastica is always looking to the future and studying the latest vehicle and user trends in order to offer even better solutions to OEMs. Its new R&D laboratory, which opened in 2019, is triple the size of its previous one and has all the latest machinery. Brianza Plastica is continually researching the latest trends in the RV market (and others) and new technologies, selecting always the latest and best materials for its product range and, in turn, the vehicles OEMs produce for their customers.

New trends

The current hot topics for the RV sector that Brianza Plastica is focused on are the move towards e-mobility, the requirement to reduce weights of leisure vehicles, environmental pressures around recycling and the chemicals used in its products, plus potential changes or enhancements in production techniques by OEMs which affect the requirements of its fibreglass laminates.

Weight reduction. Reducing the weight of leisure vehicles is very important for a couple of reasons. Firstly, an important factor that is going to effect the RV market in Europe more and more, is that the latest generation of customers have licences that restrict them to a driving motorhomes or car and caravan combinations up to a maximum weight of 3.5 tonnes. The RV market has been growing well, particularly during the coronavirus pandemic, but many of the new buyers entering the market are from the younger generation who, in Europe, cannot drive the largest mo-

torhomes or tow the bigger caravans without taking an additional driving test. The second reason is that e-mobility legislation in many countries is requiring petrol and diesel engines to be replaced with electric power. This puts further pressure on Brianza Plastica to offer manufacturers lighter solutions to reduce the weight of the leisure vehicles they produce. To help OEMs achieve this, Brianza Plastica is researching ways to make the side walls and floors lighter in weight: one way to do this is to make its laminates thinner, while maintaining high structural integrity and quality.

Recycling. To reduce waste and help the environment, there is increasing pressure from the public and government legislation to improve the amount of parts in every product that can be recycled. Brianza Plastica is researching ways to reduce the number of different materials it uses to make it easier for its customers to recycle them. *"The first step is to help our customers to reduce the variety of materials"* commented Stefan Bachstein, Flat Laminates Manager of Brianza Plastica. *"The next step is to provide our customers with a product that can be recycled. This is an important focus for the next 3-5 years. The next step is to have a fully recyclable GRP"*.

VOC. Brianza Plastica is also researching how to reduce the amount of Volatile Organic Compounds (VOC) in its products – an issue which some OEMs are taking very seriously as VOCs can create a strong smell in their leisure vehicles. This means developing new polymers that don't have solvent and plasticides in them. Brianza Plastica has already developed a lot of materials for interior walls using new solvent-free polymers with less VOCs and covered with textiles so they do not look like plastic – or smell like plastic. They are tested to assess their sound-proofing qualities and damp absorbency. This creates a nicer atmosphere for the interior of the caravan or motorhome and without a significant smell. *"The younger generation do not want to use so much plastic, they prefer wood and more natural materials, but there are disadvantages of using these in a caravan, so we have developed alternative materials to use that give you a good feeling when inside the caravan,"* said Stefan Bachstein.

Decorative materials

In addition to reducing VOCs, Brianza Plastica has also been developing new polymer materials for floor and walls which can be decorated and produced with different styles. These have been developed to replace wood used in caravans and motorhomes while also creating a more attractive interior finish. Its aim is to try to replace wood used in caravans and motorhomes, to remove problems with absorbing humidity/damp. When the wood is inside a panel covered with GRP and plastic materials, the humidity cannot get out, so new solutions have been developed by Brianza Plastica using vinyl, PVC and laminated fibreglass, especially for the floor. *"Our customers used to have to glue the vinyl by hand on the plywood floor, now they can take our fibreglass laminated with the vinyl and glue it on the insulating foam to create a sandwich panel,"* said Stefan Bachstein. Brianza Plastica is now producing Elyplan Design, a composite laminate characterised by bonding PVC or paper onto the fiberglass laminate on the production line. It's a good solution for indoor applications, e.g. floors and walls.

E-Mobility

While a battery powered motorhome may still seem some way off, and the towing capacity and range of most electric cars still rather inadequate to tow the latest caravans, future e-mobility plans create new issues for Brianza Plastica. For example, one of the new issues that e-mobility creates is that, if batteries catch fire, they can burn at extremely high temperatures. Brianza Plastica is introducing in the market a new laminate product it has developed to cope with this: it has a very special new resin for the underfloor to protect it against the risk of fire from the batteries.

"We can use existing resin materials and trying to make them flame retardant", said Stefan Bachstein, *"but to do this you have to fill the polymer with a material to make it not burn. In general this makes them thicker and much heavier – even by as much as three times heavier. That was the old way of thinking. Now, we have to use new thinking, and have found a polymer used in the railway industry which doesn't burn and is also much lighter. As a result, we can now make a good product which is only 1mm thick instead of up to 2.5mm before. The weight per m² which is fire retardant is about 3.5kg/m², but our new product is under 1kg: so, if with a weight saving of 2.5kg, for a caravan that is, say, 7m by 2.30m, is 14m², that is a total weight saving of 35kg which is quite a lot. As batteries add weight to a vehicle, the weight saving we offer with our new product is therefore very important. We have developed this new product after learning a lot from the truck sector we supply, which has had the same issues, as there are a lot of e-mobility things going on for trucks, too"*.

Brianza Plastica benefits from being located in an area that is the centre of the fibreglass industry and chemist technology in Europe, so it has all the best information, people, network and resources available nearby. *"We have a good team and a new very advanced laboratory. We are the best partner for developing new solutions. We know the market and aim for the best quality research and outcomes for our customers,"* added Stefan Bachstein.

Company Profile

Brianza Plastica was established in 1962 to produce fibreglass laminates. Over time, it has significantly extended its market presence with a comprehensive product range. It has served the construction industry and has been enjoying increasing success in the transport sector since 2006. In this arena, it supplies fibreglass sheets and rolls both to manufacturers of recreational vehicles and to lorry and refrigerated-trailer producers. The Company is based in Carate Brianza (north of Milan), with other factories in Ferrandina, Ostellato and two in San Martino di Venezze, all based in Italy. It has commercial branches in Lyon (France) and Elkhart (USA). Brianza Plastica is one of the european largest manufacturer of fibreglass laminates; it produces laminates with both hot continuous and cold discontinuous technology. The Company has 260 employees and invoices over 70 million euros.