



Internal coating of the fairing of a Hobby campervan

Automotive technologies in the RV industry

The preparation of a new production line will increase Ama Composites' opportunities for interacting with the RV world, firmly positioning itself as a full service provider capable of processing complex projects using technologies derived from the automotive sector. The company can work on interiors and exteriors, ranging from small camper vans to large motorhomes

Words Renato Antonini

Ama Composites' goal is clear: to bring technologies and materials already in use in a more advanced sector such as automotive to the RV sector. It is undoubtedly a difficult step, but the Italian company has the necessary know-how to do this. Despite the challenges of this difficult period, Ama Composites continued to invest, especially in LWRT (Light Weight Reinforced Thermoplastic) technology, the most innovative and most suitable for establishing a bridge that connects the RV sector with the automotive manufacturing world. In the coming months, certainly before the summer, a new fully automated production line will be installed in the company to produce various types of parts, both with LWRT technology and with other technologies, for example using thermosetting materials or composite

materials. It will also be possible to produce large elements, close to 3metre x2metres, in high volume numbers similar to the automotive sector, up to 350 pieces per day.

"The search for advanced solutions and innovative materials is in our DNA, - explains Marco Corradini, CEO of Ama Composites - it is part of the company mission. 3% of our turnover is invested in Research and Development. At the moment, for example, we are patenting new thermoplastic composite materials for floor application, to be used in the naval and railway sectors, as well as the RV sector. Ama Composites is able to create products of all types using super-technological materials and at the same time with significant production volumes. The fundamental themes of our research are ultra-performance materials, lightweight and of

a good aesthetic appearance. We are also leaders in aerogel-based solutions for a high degree of thermal insulation".

Full service provider

The company of Campogalliano presents itself as a partner to the manufacturers for the joint development of important and complex parts of the RV. It is not necessary for the RV manufacturer to arrive with a project already defined: once the mathematics of the vehicle has been provided, Ama Composites can proceed autonomously by modeling the surfaces in a concept, and then move on to define in detail the materials, finishes, thermal and acoustic insulation systems, to finally achieve the definition and realization of the molds.

"We can offer a complete package that in-



LWRT cover headliner

The new pop up roof project that will soon be launched on the market





Where and how

Thanks to the use of various technologies and our internal design studio, Ama Composites is able to create different construction elements for campervans and other types of RVs.

- **Campervan interior paneling**

Internal cladding panels are created for the vans, in particular for the walls and roof. Several technologies are combined, including LWRT, ABS + R, S-RIM, R-RIM, S / R-RIM. It is possible to combine a layer of polyurethane for thermal and acoustic insulation, just as the element can be integrated onto fabric, imitation leather (PVC or TPO), non-woven fabric covering (it is possible to reproduce the same type of covering used in other parts of the passenger compartment).

- **Internal trims**

It is possible to create trim elements in various parts of the passenger compartment, for any type of RV. For example: lower part of the drop-down beds and wheel arch covers. Various types of technologies are used, with the use of different materials, including resistance to high temperatures. It is also possible to apply a specific finishing material integrating this in the component construction phase.

- **Pop up roof**

Currently Ama Composites is engaged in the construction of a pop-up roof for a European company in the camping van sector. It is possible to build the outer shell of the lifting roof and also the underlying base. RTM thermoforming can be used, but also more advanced composite materials with injection molding. The roof is already produced with the internal lining.

- **Floor**

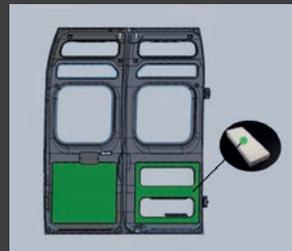
Lightweight and robust floor panels with integrated thermal insulation can be constructed. The insulation can be in aerogel, with high insulating power in relation to the thickness. Ama can integrate a floor plate heating system (integral or in predetermined areas). At this moment Ama Composites has started a collaboration with Palomar for the realization of a complete system of floors for RV.

- **Door panels**

Panels are made to complete the internal part of swing doors and sliding doors. Various technologies can be used. The constructive element can usefully integrate high-performance thermal insulation, such as a 3 mm thick layer of Aerogel super insulating material.

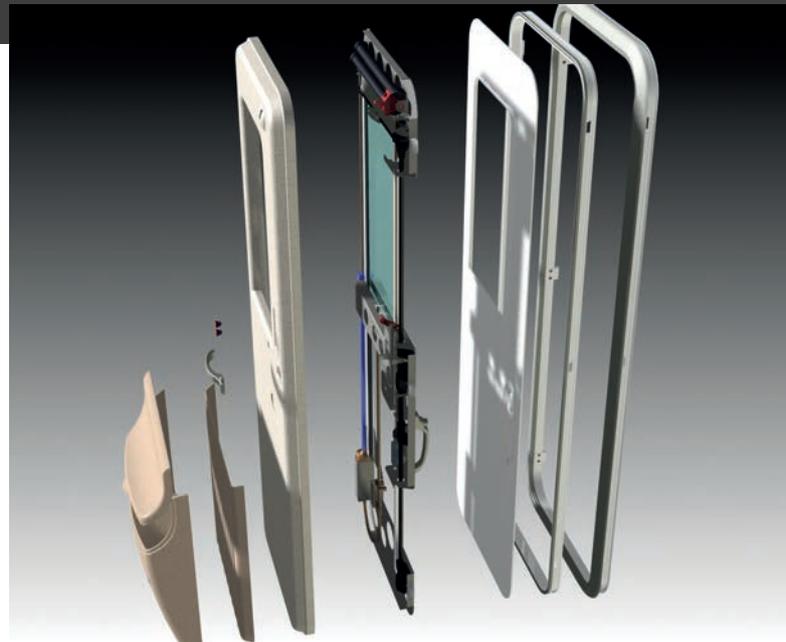
- **External construction elements**

Thanks to LWRT technology or other construction methods (RTM, RIM ...), various construction elements, structural or non-structural, of motorhomes, overcabs, semi-integrated and caravans can be made. Ama Composites in the recent past has already produced motorhome fronts, attic blocks and aerodynamic fairings.



cludes design, prototype construction and actual production, - says Marco Corradini - "we are also open to collaborating with manufacturers for co-design and co-engineering activities, making our studio interactive, working on the design in collaboration with the technical offices of the manufacturers themselves".

The choice of LWRT technology for the RV world is not accidental, it derives from Ama Composites' experience in the automotive sector. It allows the creation of mechanically strong and lightweight elements. With the same thickness, a 4 mm LWRT sheet weighs four times less than one in Abs, reaching 1,000 grams / m². Since Ama Composites entered the RV world with innovative solutions in 2007, many things have changed: the company has grown considerably not only in turnover, but also in experience and production capacity. The activity of Ama Composites ranges in different areas, thanks to the collaboration with the other divisions of the Ama group: it is not only able to combine different types of technologies, but also to integrate elements relating to wiring, to on-board instrumentation, progressing towards complex mechanical elements such as steering systems and passenger seating.



Company profile

Ama Composites is an Italian company based in Campogalliano, in the province of Modena. It is a division of the Ama group, a production company that employs 1,300 people and has a turnover of around 200 million euros. The Ama group is based in Italy, but has offices in various parts of the world, from China to South America, from India to Russia, and also in Indianapolis, near the American "Caravan Valley". In all, it has 33 companies working in various activities, from automotive to spare parts for agricultural machinery, through building & construction. Ama Composites was founded in 2004 and has been active in the RV sector since 2006. It operates in the field of high tech. composite plastic materials, materials that are able to ensure high strength and low

weight, being able to be molded into the desired application. The internal Design & Engineering department of Ama Composites is able to develop every element of a vehicle, from the smallest detail to an entire vehicle system, both external parts and internal elements, including parts related to wiring and instrumentation. Ama Composites focuses heavily on innovation, investing at least 3% on average of its turnover in research and development. The company has the ability to work using and integrating various technologies, from vacuum thermoforming to thermoplastic injection, from SRIM to LWRT, including RTM and the innovative and patented GRIT process (Gloss Resin Impregnated Thermoplastic) as well as systems that include the use of super insulating materials such as Aerogel.