

The Multi 50 Arkema 4 is taking shape

The construction of the Multi 50 Arkema 4 announced last year by Arkema and Lalou Multi is well underway. Designed by marine architect Romaric Neyhousser, this innovative trimaran will be skippered by Quentin Vlamynck under the watchful eye of Lalou Roucayrol who manages the project and takes on the role of coach. The three men disclose the rationale of the boat and review the progress of its construction, the boat's launch being scheduled for Spring 2020.

A new rationale

The long design phase of the Multi 50 Arkema 4 is over and the design of the future trimaran has been approved. "Thanks to feedback from the former Arkema 1, Lalou Multi and his sponsor-partner Arkema have laid down a new framework. This first trimaran built by Lalou Multi was based on a short-handed crew at sea. The latest Arkema 4 has less typical features, is more versatile and more efficient for the crew as well as inshore. This has guided the choices regarding the platform, in particular for the "X" crossbeams (not parallel beams) used to optimize the ergonomics in crew sailing", explains marine architect Romaric Neyhousser. "The geometry of the boat has changed compared to the former model as it is being built around the foils. For example, we have reduced the volume of the floats. The central hull too will be very different", comments Lalou Roucayrol.

Much work has gone into the aerodynamics of Arkema 4. "The idea is to reduce the aerodynamic drag as much as possible, even more than on the other Multi 50. The objective is to profile all the shapes that produce drag, in particular for the crossbeams, but also to work on the sheet effect of the sails. The fairing adds weight, but we believe that the resulting gain will offset this additional weight", explains Romaric Neyhousser.

Cockpit with enhanced protection

Although Arkema 4 will be a very high performance boat in major crew races, it will also have to be suited to ocean sailing, in particular with regard to on-board protection and "relative comfort" at high speed. Arkema 4 will offer greater protection for its sailors than its predecessor. "It's vital to keep up the pace more easily sailing as a pair or solo, and to be able to go fast over a sustained period of time, including in challenging conditions", explains Quentin Vlamynck, the future "pilot" of the machine.

Integrating the Arkema Group's materials

Arkema and Lalou Multi share a desire to apply and make the most of their expertise in materials and boat building. "We are using this building project to draw up an inventory of all Arkema materials that can prove beneficial to our boat's performance but also the Class as a whole", Quentin points out. For example, the Elium® thermoplastic resin is used to manufacture a number of components, including the crossbeam mould that will be recycled when construction is over. Other applications include a greater use of the wide range of Bostik adhesives, the production of parts using 3D printing, and work on the batteries.

Daniel Lebouvier, Innovative Technologies Manager at Bostik, comments on the philosophy of this partnership with Lalou Multi: "From the start, integrating our materials into the boats has been a major component of the project. The first trimaran Arkema 1 benefited from our Bostik structural adhesives and Altuglas® glazing. The mini 6.50 Arkema 3 prototype was the first racing sailboat fully built from Elium® composites with a recyclable matrix. In the new Multi50 Arkema 4, we are still using these solutions which have now been tried and tested, while also introducing new ones. The Arkema Group boasts plenty of innovative technologies dedicated to reducing the weight of structures, protecting them in extreme environments, and managing energy. Ocean racing is an exceptional testing ground for us. And we benefit from the expertise of the Lalou Multi team to tweak and fine-tune as required. It's also a matter of great pride for Arkema's team to see their products in action in such a demanding environment."

What's the state of progress of construction?

Apart from the mast (built by Lorima) and the monotype foils, the Lalou Multi team is managing the entire building of Arkema 4, in close collaboration with Arkema's R&D teams. Construction is on schedule. The moulds for the floats, the central hull and the crossbeams are ready. Ancillary parts (like fairings and mainsail traveller) are ready

and waiting to be grafted. Meanwhile, the new Lalou Multi construction site is now ready at Verdon-sur-Mer. The site will be fitted in the summer, and it is there that the floats and the central hull will be built, starting in September. All the parts should be assembled in December-January. Then all the systems will be fitted on board, ready for the boat's planned launch in Spring 2020.

In the meantime, while he is heavily involved in the construction of his future boat, skipper Quentin Vlamynck continues to build up knowledge and experience thanks to an intense training program, and is being coached by Lalou Roucayrol. In addition to courses as well as training in false solo mode, both sailors will also be present in the major races of the Multi50 circuit at the helm of the Lalou Multi trimaran, from mid-July. An opportunity for Quentin to further improve his knowledge of the boat, enhance his skills in leadership and automated equipment, and above all clock up experience before the launch of *Arkema 4*.

Progress reports on the *Arkema 4* construction and the crew's training will be posted to the Lalou Multi and Arkema Sailing social networks.

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