On 8 November, 33 boats left Les Sables D’Olonne, France to begin what may be the most challenging race in sailing. The Vendée Globe, which takes place every four years, is the only non-stop, unassisted, single handed round the world race. The IMOCA 60 yachts and the sailors face challenging conditions rounding all three capes and fighting their way through the Southern Ocean. In order to survive and succeed, these boats need every advantage. Strength and speed will make the difference between winning the race and potentially being unable to complete it.

For 20 years, Gurit has been proud to supply our expertise to these exceptional vessels and their teams. Since Ellen MacArthur’s Kingfisher in 2000 to the latest designs for Hugo Boss, DMG MORI and Charal, Gurit has supported IMOCA builds with both engineering and materials. In this latest iteration of the race, 16 of the competing boats feature Gurit materials, and 12 have benefitted from the skills of Gurit’s engineering team. From Corecell™ for high slamming areas to prepreg material keeping the boats at minimal weight to designing structures that can handle the high stress loads of these racing machines, Gurit is represented across the fleet and is proud to be so deeply involved in these builds.

We wish all the competitors a safe and swift passage.
Currently under construction is Vitamin Sea F45, a day charter sailing catamaran for Sailing Bora Bora in French Polynesia, designed by Bakewell-White Yacht Design and being built at Davie Norris Boatbuilders in New Zealand to ISO Category A. This 45ft catamaran is utilizing a Gurit Hi-Panel engineered customized solution for the entire construction method including the deck, hulls, interior support components and roof canopy. The build features a range of Gurit materials throughout: Gurit Corecell™ M foam for the high impact slamming areas in the hulls, Gurit PVC 80 and 100 for beams and internal structures, as well as PRIME™ 27 and Ampreg™ 31 resin systems, e-glass and carbon reinforcements.

The Hi-Panel engineered system consists of a series of infused composite sandwich 9m x 2m panels, CNC cut to shapes, complete with accurate detailing and rebating by Gurit. The panels are then delivered direct as a kitset ready to be fitted together allowing the builder to have several components under construction in parallel for a fast assembly. With this concept in mind the large sunroof canopy which will collect rain water and also feature solar panels for energy supply onboard as well as providing shade for the passengers, was built separately in the same shed then fitted on top of the deck.

Gurit looks forward to seeing Vitamin Sea F45 on the water in 2021 and sailing off to her new home for lagoon cruising around Bora Bora.

“Using the Hi Panel construction system enabled for a faster assembly time and Gurit provided on-going engineering and design support throughout the construction process.“

Davie Norris, Davie Norris Boatbuilders
Beach sailing innovations

Sven Kraja is the first and so far, only German world champion in beach sailing (2012). He is also the owner of Frog Sails, a manufacture of state-of-the-art sails for yachts, beach and ice sailors. The company puts pride in their material and technology utilization and benefits from experience both in sail making but also in regatta sailing. Sven has competed for Germany more that 20 times and has repeatedly sailed at European and World Championships and reached high rankings. The experience he gathers during these races is later used in the design process to produce even more efficient sails.

The materials used in manufacturing is key for a successful design. Sven recently switched to start using the newly developed AMPRO™ multifunctional epoxy system from Gurit and here he explains what he thinks about including this in the building of land yachts.

AMPRO™ is a low toxicity resin contributing the elimination of long-term health hazards. It is stronger and more flexible with improved chemistry for bonding while also ensuring a tack-free finish after cure. It also cures faster and has an improved through cure at temperatures as low as+5°C whilst maintaining a practical working time. It also provides a glossier and improved coating performance with reduced surface defects and a wider over-coating window.

“I have been a boat builder for 30 years and have worked with epoxy all my professional life. What a difference now with the new AMPRO™ system: No sticky surfaces, the sandpaper can be used much longer than before and the long overcoating window makes working relaxed, with very good results. Also, the final coating with AMPRO™ CLR provided a super gloss level on the Carbon chessboard! A really big step forward, my new favourite is AMPRO™!”

Sven Kraja, world champion in beach sailing (2012) and owner of Frog Sails

Gurit sponsoring young sailing ambition

Gurit is pleased to announce a partnership with the Mastfell Sailing Team as they prepare for the 2024 Paris Olympic Games, participating in the 49erFX class. Members of the British Sailing Team, Alice Masterman and Bella Fellows hold national championship titles, and continue to coach while training. The team’s commitment to their ambition is impressive. Not only are they intent on their Olympic training, they are also attentive to the environmental needs of the locations in which they practice.

Alice Masterman tells us, “In the build up to a competition we like to arrive at the venue a few weeks before and have a solid training camp and then take a break and remove ourselves from the venue. This means we can refresh and come back to the venue with a clear mind and in regatta mode. It’s vital to be prepared with a list of spares, ready-made sheets & halyards and a toolbox with everything in it. Gurit have provided us with a package that means if we ever have a collision or breakage to our hull (touch wood we won’t have to use it!), we can make a quick repair to get out that day or to make sure we are all good to go the following day”.

Alice Masterman (left) and Bella Fellows (right) with their sailing dinghy.
Restoration of a TP52 racing yacht

The restoration project of one of the world’s first TP52 racing yachts, ‘J-Bird III’ is progressing nicely by new owners Ian and Annika Thomson from Ocean Crusaders, an environmental Conservation Organization. As mentioned in our last newsletter, the objective is to convert the elite racing yacht into an electric powered, zero emissions racer cruiser and spend 18 months campaigning in Australia’s biggest yacht races to promote zero emissions sailing.

Approaching 20 years old, the ‘J-Bird III’ was designed by Alan Andrews Yacht Design, originally launched in May/June 2001 and was one of the top two scoring TP52’s in the inaugural season which included Transpac, San Diego – Puerto Vallarta, MEXORC, SDYC Yachting Cup and Newport to Ensenada.

The refit plan was to cut the front half of the deck off and replace it with a new profile and then the cockpit and rear side decks would need to be re-cored using Gurit core materials, Gurit Ampreg™ 31 and PRIME™ 27 resin systems. The coach house and foredeck will be replaced using a structurally engineered Gurit Hi-Panel, an infused composite panel solution that will be delivered direct as a kitset, CNC cut to shape and ready to be fitted onsite.

Gurit’s long design heritage with racing yachts and light-weighting for marine has played an important role within this refit project, and the original laminate drawings and calculations were all on hand to help make these extensive modifications with confidence. Gurit caught up with Alan to talk about the design heritage of the TP52 and the new features incorporated for the refit.

“It has been great to work with Ian and Annika on the refit and repurposing of J-Bird III 20 years after the original design. We’ve been able to keep the performance soul of the boat and at the same time vastly increase the below decks living space with a new cabin house and foredeck to fulfil their needs for extended cruising as well as racing. J-Bird III had the top race record in the initial season of TP 52 class racing, and we are thrilled to collaborate with Ocean Crusaders and Gurit to help the boat go on to more years of racing and fast cruising” said Alan Andrews.
Gurit will be taking part in ‘METSTRADE Connect’, a marine industry virtual networking event on 10th December, 2020.
For more information, go to: https://www.metstrade.com/connect/
To register click here

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Composite Engineering

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