

MARINE NEWSLETTER

July 2024

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SL Racing

Gurit has been working with Simon and Hamish Lack at SL Racing for 14 years. But that collaboration is eclipsed by their relationship with four-time Olympian single-sculler Emma Twigg, who will defend her gold medal in Paris this month.

“When I first started rowing at Hawkes Bay Rowing Club, Simon was our hero, because he was in the New Zealand Junior Team, so he kind of inspired me in my early years,” explains Emma.

After the brothers set up SL Racing, it became a goal of hers to race in one of their boats, and she is now an SLR Ambassador, and about to start her fifth Olympic

campaign in a single scull engineered by and with materials supplied by Gurit.

SL Racing designs, builds and supplies race-winning boats and parts to the full spectrum of rowers from those starting out at school to elite world-class athletes. They are well known on the circuit, both rowers in earlier years, with Simon having competed for the national team, and they now appear regularly at events around NZ, providing support, supplies and spare parts for competitors. They have just signed up a distributor in the UK and in the process of signing up the Australian representative, this

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The hull shells are made from materials by Gurit.



Emma Twigg training on Lake Karapiro.

will double sales within the next year and triple sales within the next 3 years so both Simon and Hamish will start doing a fair bit of international travel.

High performance materials as standard

The hull shells are made from Gurit carbon and Nomex honeycomb, with Corecell™ structural foam core used in some models. It's not unusual for competitive rowing shells to be made from carbon skins and honeycomb core due to the materials' low weight and stiffness. SLR are therefore always looking for how they can refine and improve their designs and construction techniques, to give their customers the winning edge.

Following feedback from Emma and her coach that she was experiencing twisting of the hull mid-section, SLR approached Gurit's engineering team to collaborate on a solution.

“The mid-section between the riggers and the foot stretcher is where the rower develops most of their power, yet this is also the section where the deck is removed to accommodate the cockpit, thereby decreasing the torsional stiffness in the exact place where you need it most,” explains Gurit Senior Design Engineer, Yoan Stephant.

Thinking outside the box for ultimate performance

These are ultra-light boats where every additional fiber has potential to influence the podium positions. Generally single skins, with fibers in the 0/90 direction, it's not possible to simply add a 45 degree patch to the area due to the weight penalty. To provide Emma and SLR with a suitable solution meant thinking outside the box. Gurit devised a solution of X strips, which were placed in critical areas and in a way that minimized the amount of



additional material, to significantly increase the torsional stiffness of this critical section of the boat.

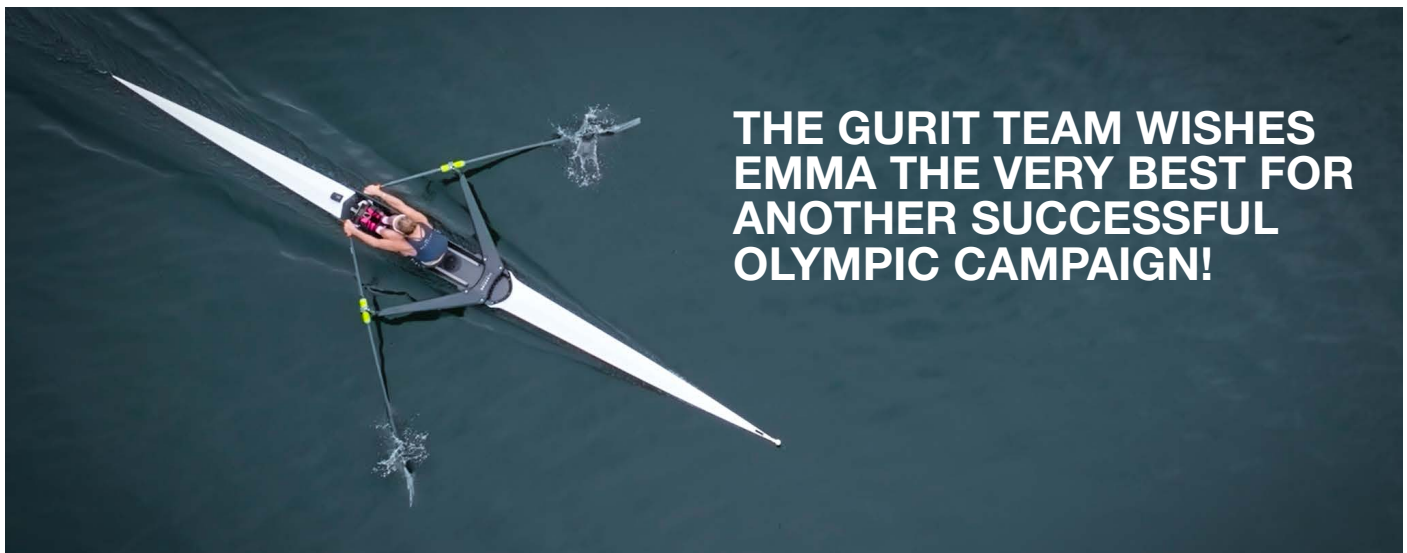
“Tony and Yoan (Engineers) were amazing with this, we were on a very tight schedule so I contacted them one particular morning, in the afternoon we had a zoom meeting and the next day I had the 1st draft of drawings that were easy to read but also using material we already stocked from Gurit.” said Simon Lack.

After rigorously trialing and getting Emma's seal of approval, the final shells were built, shipped and are now in Europe and will start racing at the Olympics on the 27th July.

Prepreg brings advantage to new reverse riggers

As well as carbon hulls, SLR designs and manufactures carbon seats and feet stretchers. Their latest development has been the carbon reverse rigger, called the Carbon Wing, and it's a feature of Emma's new boat. Typically, riggers are made from aluminum and positioned in front of the rower.

“Moving to Gurit SE 75 carbon prepreg for the reverse rigger offers a really nice material to use, offers long shelf life especially when something else urgent comes up and we can post cure with our boat hulls at 70 degrees.”





Marlow Yachts: Extensive light-weighting and optimization of structures

Photo credits: Michael Huang / Marlow Yachts

Marlow Yachts has worked in collaboration with Gurit since 1999 and is one of world's leading manufacturers of ocean-capable luxury motor yachts, with their China-built Explorer Series of vessels ranging from 53 - 88 feet (16m - 27m).

Several considerations are paramount for a vessel undertaking an ocean voyage: strength and reliability, fuel economy and range. As part of Marlow's continuous improvement approach, they recently undertook a full structural optimization of both the 58 and 66 foot models to see where gains could be made in these areas.

Having previously reduced weight through the introduction of carbon fiber construction into their superstructures, Marlow wanted to consider weight reduction in the hull through the optimization of E-glass and/or the use of carbon. An in-depth study enabled Marlow to consider the optimal use of materials and different construction techniques that would also integrate well with their current production processes. Marlow is now going through building some test components before moving into production with improvements across the entire fleet.

Marlow is continuing to look at improved technology to reduce fuel consumption and committed to light-weighting and construction techniques to remain at the forefront of powerboat design and deliver excellence across their range. <https://marlowyachts.com/>



Marlow have gained the trust of Gurit Corecell™ with a 25 year track record of success on the water and recognized by many happy Marlow luxury yacht owners.



Historic Catboat 'Vigia' is reborn!

A special restoration project is now completed by the Classic Boat Museum in Cowes on the Isle of Wight (UK). The volunteers, with support from Gurit UK (Newport, Isle of Wight), have built a replica of Vigia, an 1872 Catboat which arrived waterlogged at the museum in 2006.

A local boat comes home

Vigia was built by C Corke, of Birmingham Road, Cowes, in 1872, and is an English version of an American type, popular in the UK in the 19th Century. Just under 24ft long, with a beam of 8ft 4ins, she has a shallow hull form with a centreboard. Her original rig had one mast, which was set far forward, a 28ft boom and a 440 sq ft gaff sail.

Catboats, with their huge sails, were not well suited to local conditions and went out of fashion in Cowes. By 1891 Vigia was registered with the Royal Harwich Yacht Club and spent the next 100 years sailing and racing on the smoother waters of the east coast, where she became very well-known and much admired.

Restoration and rebuild

At first the plan was to restore Vigia, reputedly to be the oldest sailing boat on the British register, using as much old wood as possible. But this proved impractical when the GRP was stripped back to reveal what was underneath. With only the topsides suitable for restoration, the museum volunteers decided to build a Vigia replica from scratch, to better demonstrate her sailing and handling qualities.

The Vigia replica is made with the carvel construction technique, with narrow softwood planks fixed to a frame and butting up to each other. The whole of the interior and exterior was sheathed with Gurit's AMPRO™ clear epoxy laminating system, and she has been painted in her original colours.

Find out more here: <https://www.classicboatmuseum.com/single-post/vigia-on-display-in-cowes-week>



The deck being laid using Gurit AMPRO™ resin.

MTM Industrial Composites

MTM Industrial Composites, (an affiliate company to Al Masood Group) are Headquartered in Dubai and they are our Gurit authorized distributors for structural foam, epoxy systems, vacuum infusion systems, carbon fiber, prepregs, adhesives, sealants, as well as coatings and reinforcements.

MTM has many years of expertise in servicing the Marine, automotive, aerospace, architecture, construction, and a wide range of industrial sectors in the UAE and the Gulf region, understanding very well the complex demands of these industries and providing the most sustainable solutions in every sector.

They have built a solid track record of satisfied clients who appreciate both quality and performance, amid growing environmental concerns.

“We remain committed to providing the most environmentally friendly composite solutions, which is why we only offer products from premium trusted brands such as Gurit, who have a strong focus on sustainability as well

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OUR PRODUCTS AREN'T JUST MATERIALS - THEY'RE THE BUILDING BLOCKS OF SUCCESS FOR OUR CLIENT'S PROJECT.

Ghassan Younes, Regional Manager,
MTM Marine LLC

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as reliability and performance. Our products aren't just materials - they're the building blocks of success for our client's project,” said Ghassan Younes, Regional Manager, MTM Marine LLC.

Earlier in the year, the MTM team attended the Dubai International Boat Show 2024 with their eye catching display attracting a lot of attention.



The MTM Industrial Composites Team at the Dubai International Boat Show 2024.

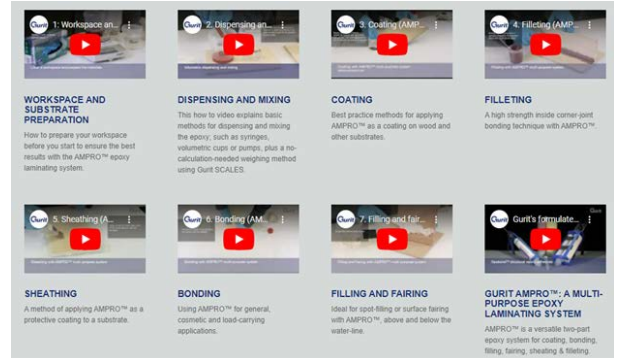


AMPRO™ Multipurpose

AMPRO™ is an award winning, latest generation multi-purpose epoxy system from Gurit. It is a simple to use, all-purpose epoxy which can be used for bonding, coating, laminating and filling.

On the Gurit website there is a series of **AMPRO™ HOW-TO VIDEO TUTORIALS.**

<https://www.gurit.com/ampro-multipurpose/>



Leech 38 V2 Power Catamaran

Construction is progressing well with the Leech 38 semi displacement power catamaran. Designed by Dan Leech and in build at Lifestyle Yachts in New Zealand. She features Gurit Corecell™ and Gurit PVC foam core in the hull and deck structures and interior bulkheads.

Lifestyle Yachts chose to prefabricate and CNC-machine in house, the cored composite panels for the interior components, decks, soles, saloon and cockpit floors, as well as the carbon hardtop. The hull, with bulkheads and reinforcement patches already bonded in place, has been turned, and the focus is now moving to installation and fit-out.

“By prefabricating the panels, we have already reduced our waste levels, and we anticipate a reduction in build time with an estimated launch in November 2024,” says Dylan Banwell, Director Lifestyle Yachts.

CASE STUDY

Saving mold and tooling waste through thermoforming, using 3D Core Kits from Curve Works

When Paul Dijkstra Composites began the build of Leonardo Yachts' new Eagle 46 sailboat, a decision was made to try new approaches to sustainability and efficiency. Dijkstra approached Curve Works, a leader in adaptive mold technology.

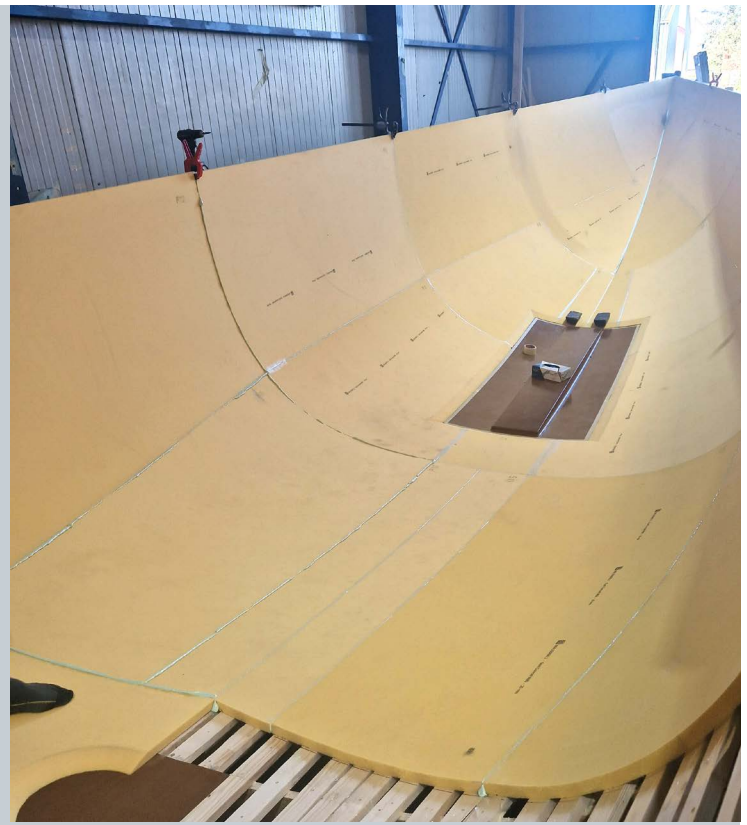
Curve Works created a 3D Core Kit of thermoformed Corecell™ M foam core, which then served as the basis for the lamination of the inner and outer carbon structure, while reducing lead time and tooling waste.

Read more [here](#)

Curve Works now available in New Zealand

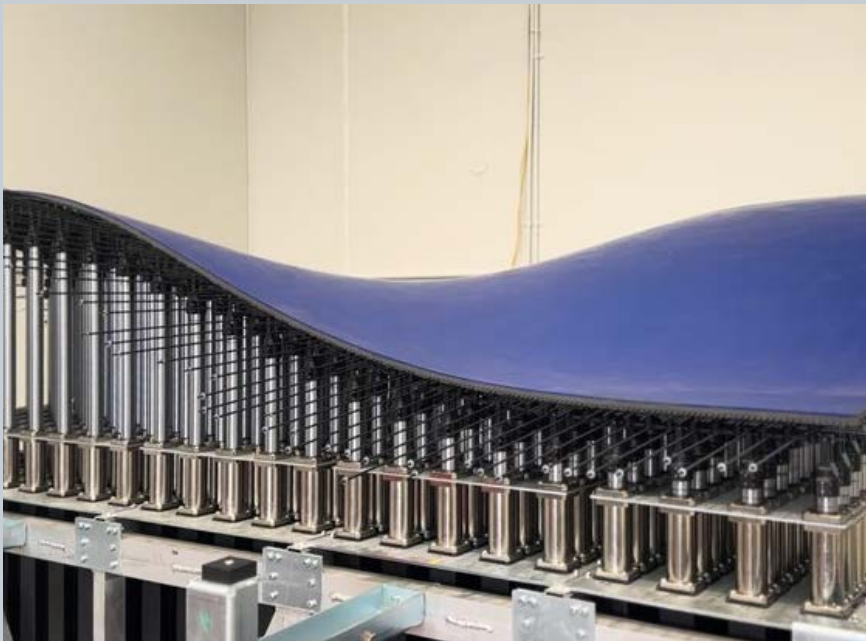
Curve Works have recently welcomed a New Zealand team to the adaptive-mold manufacturing family!

As with Curve Works and bespline in Canada, they will be offering curved composite panels and panel assemblies without any waste from molds to the Marine and Industrial sector.



In March, our Gurit New Zealand team provided materials and support with the first infusion demonstration on the new Adapa mold in Auckland.

Contact Curve Works NZ for solutions in the Marine industries: <https://www.curveworks.nz/>



Right: Infusion of a sandwich panel using Gurit PRIME™ 37 infusion epoxy, Gurit PVC 60 core in combination with E-Glass reinforcements and consumables, using an Adapa mold (left).

UPCOMING MARINE EVENT NEWS

It's always boating or race season at Gurit!

Around the world we are proud to serve the Marine industry with light weighting composite solutions & collaborate with the experts in boat building, high performance yachting, naval architecture & design.

Together with our global partners, Gurit composite materials and engineering solutions will be showcased, either on land or on in action on the water, at many Marine trade events and high performance regattas between now and the end of the calendar year.

High performance racing

America's Cup Regatta, Spain, August 22 - October 27

<https://www.americascup.com/>

The countdown is on to the world's oldest international sailing regatta, in which 6 teams will go head to head in the AC75's for the Louis Vuitton 37th America's Cup challenge for the Auld Mug.

The Louis Vuitton 37th America's Cup is taking place in Barcelona between 22nd August and 27th October 2024 and consists of five major events – prelim regatta, Louis Vuitton Cup, Youth Americas (AC 40's) Cup, Womens America's Cup (AC40's) and the grand finale the Louis Vuitton 37th Americas Cup challenge.



Vendee Globe, USA to France, November 10

<https://www.vendeeglobe.org/en>

The legendary Vendée Globe, the single-handed, non-stop, non-assisted round-the-world sailing race that takes place every four years, is celebrating its 10th edition with the November 2024 race.



Contested on IMOCA monohulls, which are 18 meters (60ft) long the skippers will set off from Les Sables-d'Olonne in Vendée and sail approximately 45,000 kilometers (28,000 miles) around the globe.

Paolo Manganelli, Head of Gurit Engineering, remarks, "We would like to congratulate both Malizia and Charal for achieving second and third places on the New York Vendée race held earlier this month." Malizia - Seaexplorer and Charal were both structurally engineered by Gurit and built with Gurit composite materials.

"The level of performance and structural reliability that both have displayed so far is extremely satisfying, and these podium results confirm our projects as top seeds. Our engineers remain committed to supporting both teams this summer as they work through the last upgrades and preparations for the big event. We are looking forward to seeing them battling it out around the world later this year in November for the Vendée Globe 2024".

Marine trade events



Vincent Pang, Gurit Sales Manager Taiwan/Philippines

The 9th edition of Philmarine, the only specialized maritime, shipbuilding and offshore event in the Philippines took place at the SMX Convention Center in Manila this month.

Gurit joined our local reseller BP Technologies at the show on booths 81 & 90 with a display of our structural core materials range and introduced the Gurit formulated range.

Upcoming Marine trade events 2024

- IBEX Show, Tampa FL USA, October 1-3
- METSTRADE, Amsterdam, November 19-21



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