

MARINE NEWSLETTER

March 2023

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***Nilaya* - 154' Sailing Superyacht**

The Panamax sloop *Nilaya*, the stunning new Reichel/Pugh-Nauta 154 foot sailing machine, was launched in early February 2023, with engineering and materials support from Gurit.

This highly anticipated superyacht is the first to utilise Royal Huisman's new Featherlight™ design and production method. By using this innovative and holistic approach, combining various lightweight solutions, over 11% of the weight was saved over typical advanced aluminium cruising yachts.

Rondal, the Dutch composite specialist, confirms that Gurit have played a major part in this weight saving

achievement by supplying the composites for the deck house, cockpit, bimini, keel trunk and tender bay.

These were engineered by Gurit and built using SPRINT™, prepreg and Corecell™ materials. The lightweight, high-performance high modulus carbon boom and mast were engineered in-house by Rondal but built using Gurit prepreps. Gurit has been working with Rondal for over 20 years and this project is another major achievement in our collaboration.

For more information about *Nilaya* visit:

https://www.royalhuisman.com/dreams_making/project405/



Photo credit: Tom van Cossanen



McConaghy Boats – Chase Zero

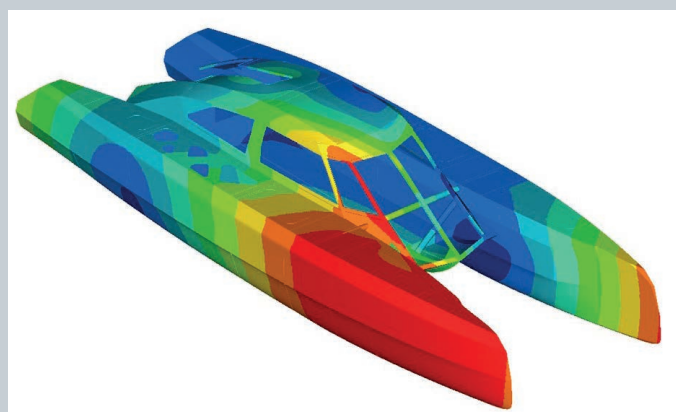
As reported in a previous issue of our newsletter, Gurit played a significant part in the development of ETNZ's Chase Zero, a revolutionary 50 knot zero emission foil-assisted catamaran, powered by a hydrogen fuel cell and lithium battery drive train.

Following the successful demonstration of this prototype, attention turned to transforming the design into a production vessel, suitable for the rigours of daily use as a chase boat in the next America's Cup event and for VIP tours.

To help realise that transition, ETNZ turned to their long-standing partner, McConaghy Boats, who last year delivered the innovative AC40 race yachts. McConaghy Boats' CEO, Mark Evans, had a clear vision of how to develop a commercially viable boat and still retain the key elements that made Chase Zero a success.

The NEW 13m Chase Zero

The new 13m configuration features a lower profile, while providing a more luxurious interior. The front end of the



Gurit undertook Finite Element Analysis to meet the structural, performance and systems requirements

cabin has been opened up with a space frame bulkhead, and full height glazing gives uninhibited views forward, enhancing the experience of the vessel's effortless gliding over the water.

Gurit's engineering team has been working with McConaghy Boats to help bring this vision to life, retaining the low weight and robust structural approach that is required to keep the boat fast - and safe - in operation.

Tooling for the 13m chase boats is now underway at the McConaghy Boats' shipyard in China. These high-speed boats will be constructed in full carbon and Nomex, with Gurit Corecell™ structural foam for impact resistance, with a total weight of 5,600kg, a draft of 2.2 metres, and a 4.5 metre beam.

For more info visit:

<https://mconaghyboats.com/yachts/chase-zero/>



Tooling underway for the 13m hull construction at McConaghy Boats China

Power and the Passion behind J-Bird

This is not your 'normal' TP52: it's powered by electric batteries and has nine solar panels on the deck, along with other modifications to reduce her impact on the environment.

After a 3 year restoration, the J-Bird, one of the world's first TP52s by Alan Andrews Design, has found its wings and was sailed two-handed in the 2022 Rolex Sydney Hobart Yacht Race (and home again), making history!

Restoration

In 2019, the boat was found rotting on a mooring before the owners made the purchase and approached Gurit with their plan to restore the 20+ year old J-Bird.

Together the couple replaced the deck and internal structure. A customised Hi-Panel kitset solution was designed, structurally engineered and manufactured by Gurit, and delivered direct ready for installation on site by the owners.

The epoxy infused, composite panel system was used for the new deck level, deckhouse, deck sides, foredeck, watertight bulkheads, with light weight panels for interior furniture and walls. The cockpit has been shortened and set up for two-handed racing together with an autopilot feature.

Electric Powered

The old diesel engine was taken out and replaced with electric drive; the sail drive was removed and a shaft installed. The old engine bay now houses the ten blue



lithium batteries, providing 22.5 kw of power to run the electric drive at 48 volts from a watertight and fireproof composite box.

The yacht also features a carbon fibre galley, with a large fridge freezer, microwave convection oven and induction cooktop. All appliances are powered by nine solar panels on deck with 124 watts each. The result is no gas emissions produced onboard.

These innovative modifications combined with the owners' true passion for sustainability have come together to create a unique zero emissions racer cruiser that should inspire others on the racing circuit to consider the conversion to renewable electric.

Gurit is very proud to have been involved in this project and wishes J-Bird all the best for her next big venture.



Grand Banks Yachts – Seamless Production Process

Within the boating community Grand Banks is a well-known and respected brand of luxury recreational motor yachts, and one of Gurit's long standing clients.

Grand Banks do most of their design and manufacturing in-house and have one of the largest production facilities in the Asia Pacific region, where they construct the Grand Banks and Palm Beach brands of motor yachts under the one roof.

The high-tech factory is based in Malaysia with over 650 full-time staff working in 51,000 square metres of a covered shop floor with additional outside space.

The company has invested heavily in the latest Kuka robotic CNC machines to perform their tooling and machining tasks to ensure precision and accurate sculpting of shapes, as well as saving time during production.

The efficiency of their workflow has proven to be a major factor in the success of the operation. Over the last five years, the factory has been modernised and its facilities re-arranged to ensure the most ergonomic passage of the motor yachts through every stage of construction and testing. The boats snake through the factory as they visit one specialist area after another.

With this organisational model, the beauty is that everything is in the right place at the right time and quality control inspections are being conducted throughout the entire process of the build. Similarly, the benefit of making everything in-house means they can control both standards and availability.

Having the highest quality materials on hand to work with is a key part of their success. Each model of the



T-Paste application

Grand Banks range is constructed with Gurit advanced composite materials including T-Paste for making mould plugs, Gurit Corecell™ and PVC foam for the hull and structural areas, and a range of dry reinforcements. Grand Banks utilise their four large CNC machines for in-house kit-setting and cutting of foam and reinforcements to maximise production efficiencies and reduce waste.



Gurit Corecell™ is used for hull and structural areas



The latest model under construction is the GB85 using Gurit Corecell™ and PVC

© Grand Banks Yachts

Racing Update

The Ocean Race 2022-23

Since its first edition in 1973, The Ocean Race has often been described as the longest and toughest professional sporting event in the world, the ultimate ocean marathon across the world's toughest waters. With many of the world's best sailors having dedicated years - even decades - of their lives trying to win it.

Teams will travel 32,000 nautical miles (36,825 miles / 60,000 kilometres) in a race around the world, visiting nine iconic international cities over a six-month period. The first leg started in Alicante, Spain, on 15 January 2023. The final offshore leg finishes in Genova, Italy in June 2023.

This edition is open to two classes of high-performance ocean-going racing yachts: the 60ft IMOCA Class and the 65ft VO65 Class.

IMOCA 60 – Team Malizia

Gurit's engineering team was pleased to collaborate with Team Malizia and Skipper Boris Herrmann, alongside VPLP Design.

Collaboration with Team Malizia started in 2019, and in 2021 the work began on the structural design and detailed analysis of the vessel's platform. The Malizia - Seaexplorer boat was built in twelve months by



TEAM MALIZIA - Gurit materials and engineering throughout the structure.

Multiplast in Vannes (France) using Gurit prepreg and Corecell™ structural foam.

Gurit engineers are still actively involved with the project and will be working with VPLP and Team Malizia, supporting the shore crew during stop-overs to review the race yacht's data from the sensors at the end of each leg. Gurit wishes Boris and the team a safe passage on their next challenging leg through the Southern Ocean.

Sydney to Hobart Race

The Iconic Rolex Sydney Hobart Yacht Race 2022

The Rolex Sydney Hobart Yacht Race has become an iconic event on the Australian summer sports calendar. It commences each year on Boxing Day from the Sydney Harbour and is known for challenging conditions, fierce battles and inspiring stories.

This ocean race attracts yachts as small as 30-footers and as big as 100-footers, sailed by crews who range from weekend club sailors to professionals from the America's Cup and Volvo Ocean Race circuits.

Over 100 yachts were entered into the 77th edition of the race and a thrilling battle for Line Honours ensued between four 100-foot maxis - Andoo Comanche, Black Jack, Hamilton Island Wild Oats and LawConnect.

Gurit has a long association with the event, with many of the fleet having been constructed with Gurit advanced materials and/or engineered by the Gurit team.

History Made by J-Bird

Gurit clients on board J-Bird Sailing made history as the first ever electric boat raced in the Rolex Sydney Hobart Yacht Race in their modified TP52. This TP52 has been restored over the last 3 years from the hull up, using Gurit Hi-Panels and Gurit engineering design, and is now powered by electric batteries and 9 solar panels. More details are available in this newsletter.

J-Bird was the first two-handed entrant home, and 11th in the IRC Division 1.

<https://rolexsydneyhobart.com/>



© Live Sail Die

Yachting Developments deliver R/P 45ft Trimaran *Trinity*

It's been an incredible start to 2023 for the team at Yachting Developments with three completed projects launched, one of which is a custom 45ft (13.7m) Performance Cruising Trimaran, Trinity.

Trinity is designed with integrated accessibility features to enable single-handed cruising and racing for a client who uses a wheelchair.

She was designed by Reichel-Pugh and built by the award-winning Yachting Developments in New Zealand, renowned for their highest quality standards.

Trinity features a carbon and Gurit Corecell™ foam core constructed hull and deck to ensure toughness and excellent impact resistance for ocean cruising. The open structural layout maximises the useable space for the owner and guests as well as providing comfort and luxury.

Trinity has been shipped from New Zealand to her home berth in Southern California.

The Gurit Formulated Series

Gurit

LESS IS MORE

Usually, our products reduce weight. This time we reduced our products. And what remains is more of everything: Space. Time. Efficiency. Health.

www.gurit.com/liquids

NEW Sustainability Report out now

#GuritCares

This month we published our Sustainability Report 2022. You can download it as a PDF from this webpage: www.gurit.com/sustainability

We hope you enjoy reading about our progress, programmes and industry collaborations over the past 12 months, and that it inspires you to take action within your own business too. Together we can make a difference.

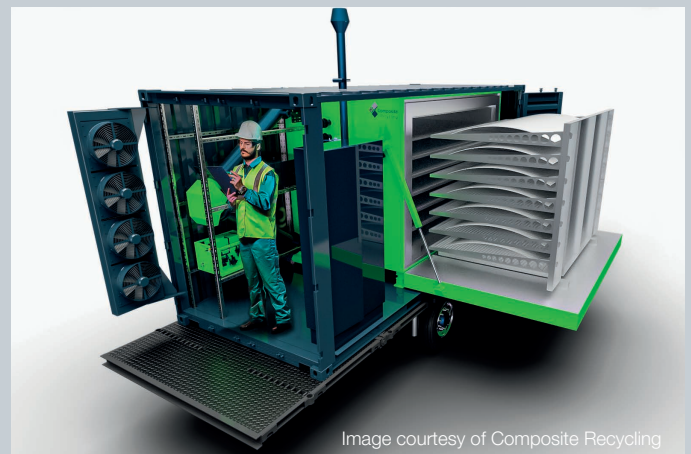


Gurit awarded Silver Medal in the EcoVadis ratings

Earlier this year, Gurit was awarded a silver medal for its sustainability performance from EcoVadis, one of the world's largest sustainability rating agencies. This places us in the top 12% of over 100,000 rated companies. We are proud of our sustainability teams and engaged colleagues around the world facilitating this success.

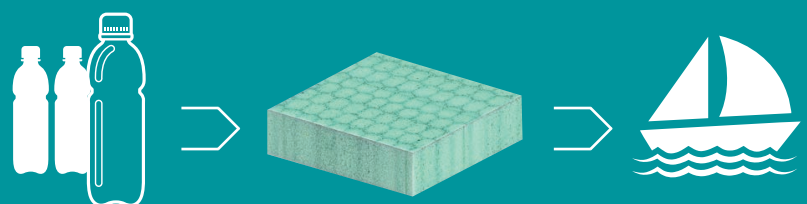
Recycling end-of-life boat hulls

Swiss company Composite Recycling, alongside the Swiss Federal Institute of Technology (EPFL) Laboratory for Processing of Advanced Composites, are developing an energy-efficient pyrolysis process to recover the fibres intact from old boat hulls, so they can be reused with new resin and have a second life. Gurit has been supplying the project with bio resin to establish and test the mechanical properties of the new composite. Composite Recycling's next goal is to build industrial scale machines, which will fit inside 20' containers.



Fast fact: from bottle to boat

In 2022, Gurit saved **1.4 billion** post-consumer bottles from landfill by turning them into PET flakes and granules, then converting that into PET structural foam for use in marine and other applications.



Meet us at these tradeshows

Gurit will be attending:

JEC World in Paris, France, 25-27 April, Hall 5, booth L22

PHILMARINE in Manila, PH, 20-22 June, co-exhibiting with BP Technologies on booths 173 & 185

IBEX Show in Tampa, FL, 3-5 October, booth 3-942

INDO PACIFIC in Sydney, Australia, 7-9 November, booth 4C24

METSTRADE in Amsterdam, 15-17 November, booth 12.601

We look forward to meeting you at one of these events!

JEC WORLD
2023 The Leading International Composites Show
April 25-27, 2023 | PARIS-NORD VILLEPIENTE

The 8th
PHILMARINE
2023

IBEX
POWERED BY METSTRADE
OCTOBER 3-5, 2023
TAMPA, FLORIDA USA

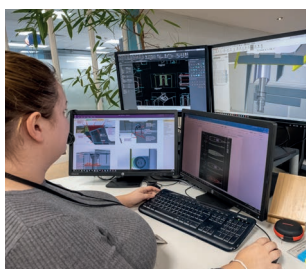
INDO PACIFIC
7-9 NOVEMBER 2023
INTERNATIONAL MARITIME EXPOSITION
INTERNATIONAL COMPOSITES EXHIBITION SYDNEY AUSTRALIA

METS TRADE
MARINE EQUIPMENT TRADE SHOW

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