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THE REFIT IS UNDERWAY... THE CLOCK IS TICKING!

NEWSLETTER #7

AN UPDATE FROM PHIL

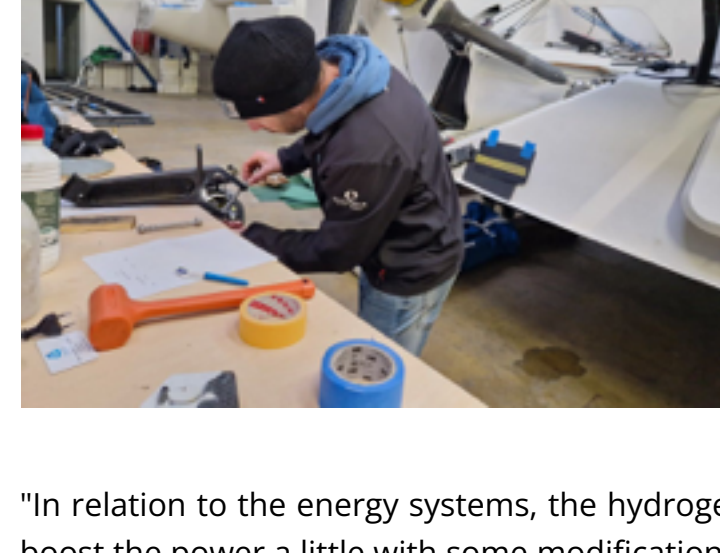
"We are back in the shed again - already!

"This month, we kick-started some priority improvements and reworks for Oceanslab, which is now in its winter base, in La Rochelle, under cover.

"Although our initial sea trials late last year were short-lived, they provided a really important opportunity to test many of the systems and establish a point of reference from which to improve things in terms of functionality and reliability.

"Firstly, we have the all-important bowsprit repair to complete. The diagnosis for why this failed in the first place was attributed to a construction flaw and so a new bowsprit has now been manufactured. Very soon, this will be joined to the boat in the controlled environment of the OceansLab technical team and ensuring the highest composite build methods are followed.

"We are also making some improvements on the appendages, in particular to the rudder and foil system, which conceptually work really well but are not yet bullet-proof in terms of adjusting them easily and reliably.



"In relation to the energy systems, the hydrogen fuel cell system has returned to the lab in order to boost the power a little with some modifications to the power control system. This provides us with a bigger safety margin, so that we can easily meet the minimum cruising speed required by the rules. We also are taking advantage of this downtime with the boat to perform some durability testing on the clean power system with these latest upgrades.

"Alongside this, is a list of other high priority and lower priority items which are pretty standard for a brand new IMOCA... and even ones that are two years old! In short, there is always a lot of optimisation to be done on this type of formula one boat before its real speed potential can be seen.

"Our plan is to relaunch the boat mid-March in order to prepare for our first race, The Transat CIC - an epic battle across the North Atlantic, upwind to New York, so far, I competed in the last edition of this famous British race, back in 2016, aboard a Class 40 and finished on the podium. So I very much wanted to come back and compete in this race, on a full-blown IMOCA.

"Our biggest challenge however, before we can go racing, is to secure additional sponsorship. This, we must confirm over the next month before we can launch the boat and start training towards this first race.

"We are therefore inviting all companies, associations and individuals who could be interested in an association with our purpose-driven project, focusing on maritime decarbonisation as well as supporting ocean science and blue carbon projects, to get in touch.

"Phil."

Phil Sharp, Skipper, OceansLab - Cleantech Accelerator



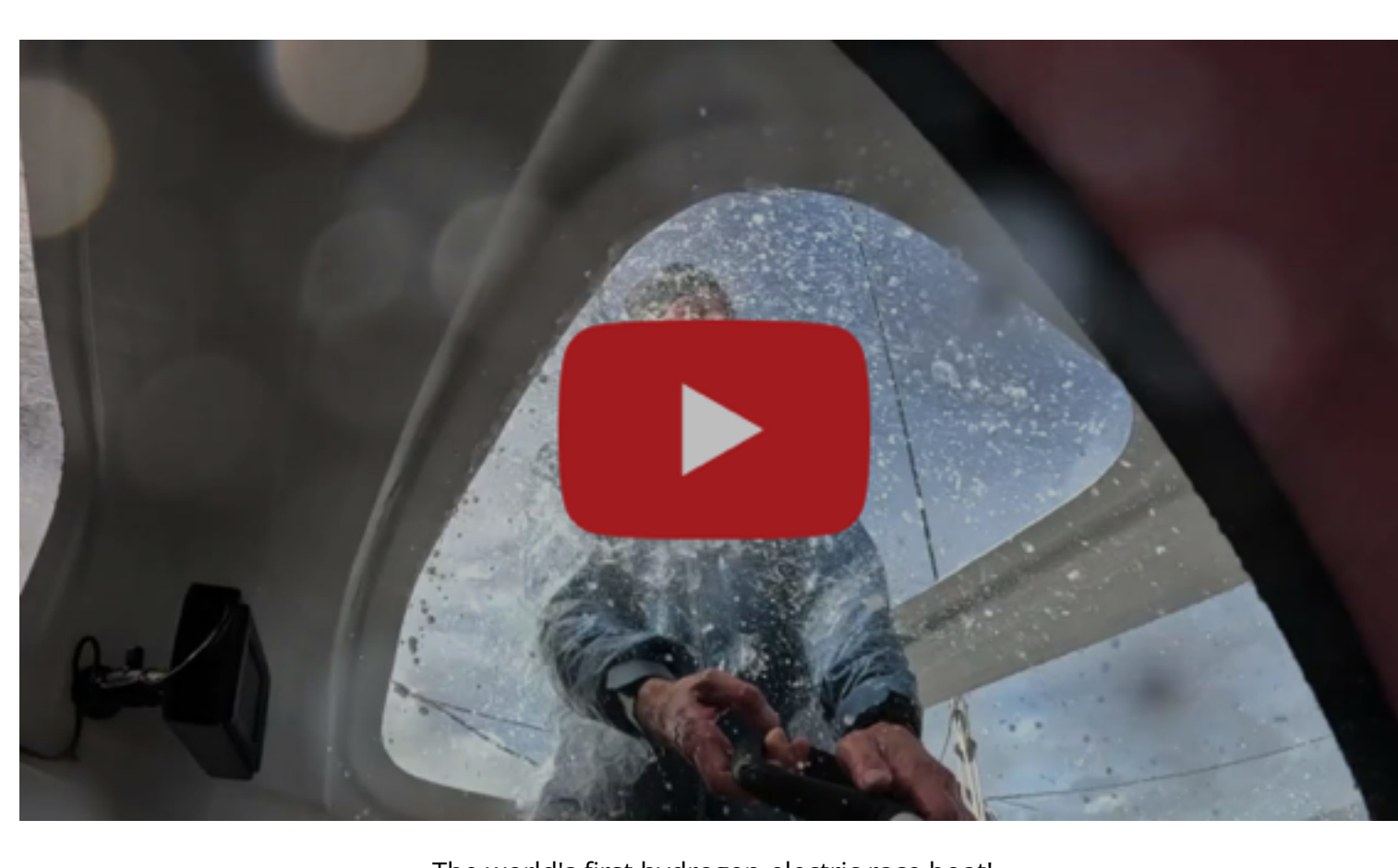
Recharging my batteries over Christmas with Julien Puvié, co-skipper of IMOCA Maitre CoQ
Credit: Phil Sharp

THE WORLD'S FIRST HYDROGEN-ELECTRIC RACE BOAT!

IMOCA race boats are the most innovative and extreme of ocean-going vessels. They are an ideal platform to showcase vital clean technologies, such as hydrogen fuel cells, and prove their durability, in the harshest of ocean environments.

"Success is the sum of many small efforts. If I have learnt anything from ocean racing, in an environment of such uncertainty, it is to persevere, to keep focus and continue to strive towards our longer-term goals. Then, without doubt, we can move closer to success.

"Often we are forced to take a step back before moving forward once more. Such short-term frustrations however, quickly evaporate when I take the time to reflect on just how far we have come already and appreciate what the long term benefits and positive impact these clean innovations will make." - Phil Sharp



The world's first hydrogen-electric race boat!
Validating innovations through the world's toughest ocean races.
Pioneering vital cleantech for maritime.

Credit: Mark Lloyd

IN CASE YOU MISSED IT

It's always beneficial to look back and appreciate how far you've come, and who has been with you along the way, before embarking on the next stage of a journey.

2023 was an eventful, and incredibly intense year for OceansLab and for all those involved in getting her out on the water!

This ground-breaking project accelerates cleantech in the ocean-going environment by demonstrating the performance and sustainability advantages of renewable energy. But it is not just the clean energy system that sets OceansLab apart from the rest of the IMOCA fleet. The sustainability of the materials used in the construction and the people who work tirelessly to make the dream become a reality, have also been at the heart of the project.

Here are just a few highlights from the past several months...

The laser positioning system enabled millimetre precision placement of the fibre layers so that they were able to be accurately laid up into the hull structure of OceansLab.

A huge effort was made to complete the build of the deck, which was built from a very low weight and stiff composite sandwich structure using two thin carbon-fibre skins either side of an ultra-lightweight nomex honeycomb core. This all helped make a very strong and rigid closed structure to deal with the pounding and slamming when launched against waves in the middle of the ocean.

In June, we saw the confirmation of support from clean energy enablers Genevoo, Oceanvolt and Maseon Solar Technologies.

Thanks also to our Partner Brétéché, we completed our first refuelling with green hydrogen late last year, one of the first for maritime, and Approval in Principle (AIP) was awarded to Cleantech Partner Genevoo for the complete hydrogen energy system installation on board OceansLab. The approval was provided by Lloyds Register (LR), a leading provider of classification and global services in marine engineering and technology.

These things alone will no doubt have a profound positive effect on the industry as a whole and embracing such clean innovations is a major step forward in accelerating the transition towards a true zero emission maritime vessel.

Later in the year, the Patron of OceansLab, Bertrand Piccard, the Swiss explorer, Clean Energy Pioneer and Founder of Solar Impulse said of OceansLab:

"OceansLab is a really important flagship. This hydrogen project is not just for 'coffee' discussions, it is to implement the project, to show that it works and demonstrate to other people how to use it. Even if I come from the world of aviation, I follow very closely what is happening on the sea and I wish OceansLab and Phil the best of luck and hope that you will carry this spirit of clean technology and clean energy around the world very soon."



Credit: PuraVida Images

DID YOU KNOW?

Hydrogen tanks are innovative cutting-edge technology.

The hydrogen tanks on board OceansLab store green hydrogen compressed at up to 350 bar, nearly twice that of a conventional dive cylinder.

The green hydrogen used is produced from renewable energy through electrolysis and compression on land, before being refuelled directly to the vessel via high pressure hose.

The big advantage of hydrogen tanks is that they are only 10% of the weight of lithium batteries, for storing the same amount of energy. This means that OceansLab can remain light, energy efficient and competitive, whilst having sufficient clean energy to recharge the batteries during long races, and also provide 150 miles motoring range outside of the races, with zero emissions.



"As the newest IMOCA to arrive in the offshore foiling circuit, OceansLab not only pushes the boundaries in performance but specifically in clean energy technologies including green hydrogen, to replace fossil fuels." - Phil Sharp

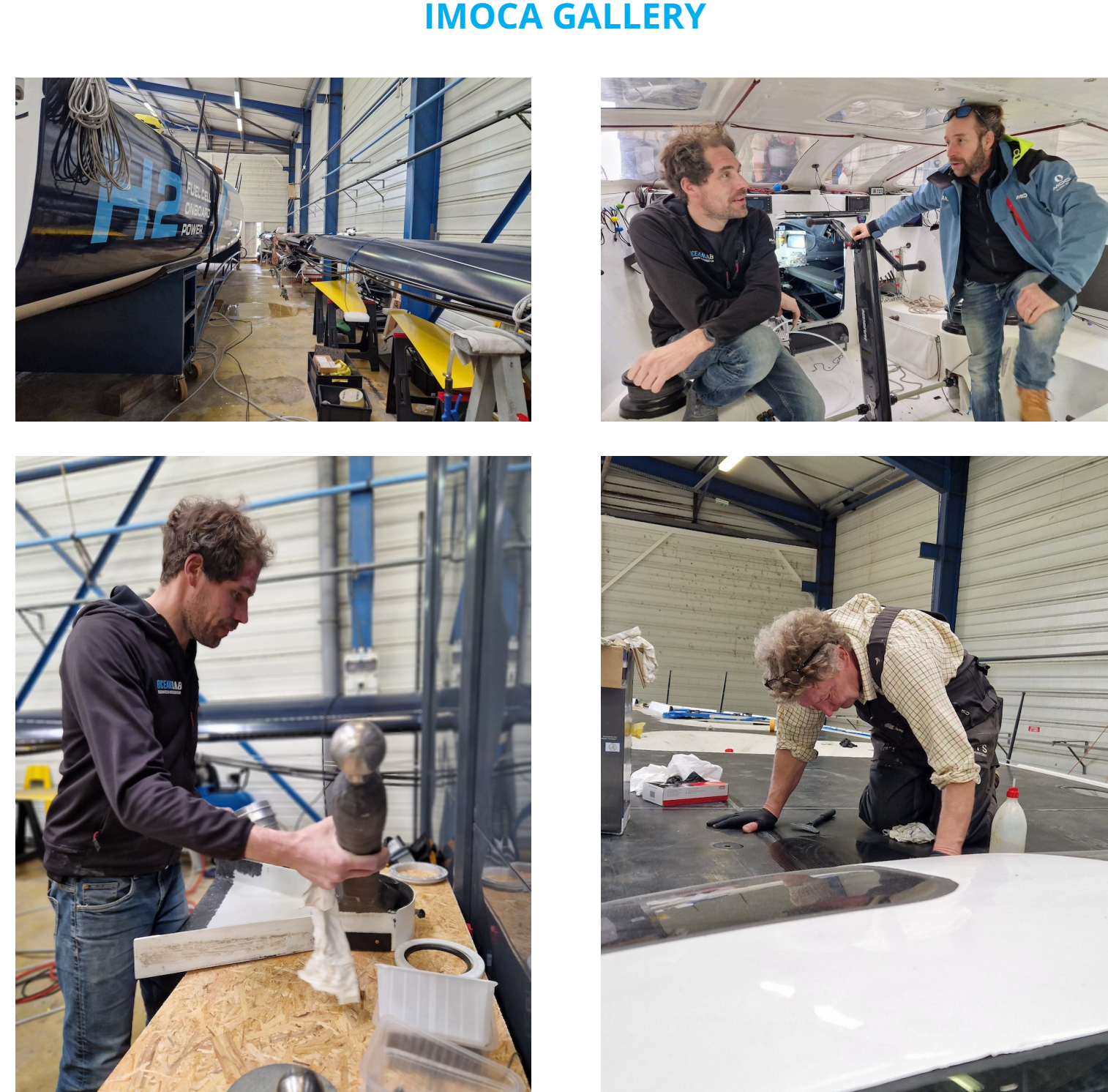
Credit: PuraVida Images

PARTNERSHIP OPPORTUNITIES

Unique opportunity to become a lead partner of OceansLab and support our mission to accelerate the uptake of high performance clean innovations through the world's most extreme ocean races.

[READ MORE HERE](#)

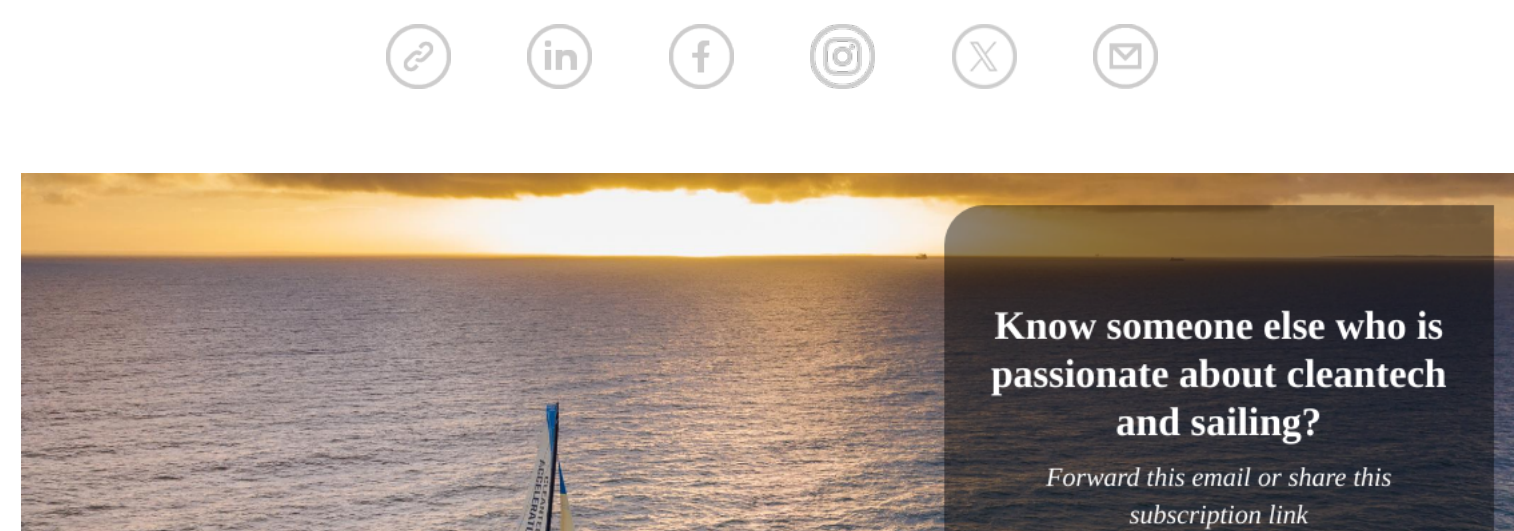
IMOCA GALLERY



Credit: OceansLab

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