



#technology #adventure #submarine #robotics #drone #challenge #sponsoring #cycling #crossing #Blériot #Plymouth #Saint-Malo #La Manche

DELAIR-TECH IS SPONSORING THE PILOT FISH PROJECT, AN UNPRECEDENTED TECHNICAL CHALLENGE INVOLVING

From 5 to 12 August 2016, Michel de Lagarde, the co-founder and CEO of Delair-Tech and Antoine Delafargue, Director of a petrophysics department in a major company, will be carrying out their zany project of crossing the English Channel from Plymouth to Saint-Malo in a pedal-powered submarine.

A submarine project? A non-identified submersible object? An abyssal Brexit?

The two adventurers will share their “view from below” of this historical crossing place, the English Channel. They will be undertaking an unprecedented crossing with backing from Delair-Tech, which is providing its specialised expertise in on-board navigation and electronics systems.

The team of the Pilot Fish project is getting ready to achieve an unprecedented exploit

At the beginning of August 2016, on the 80th anniversary of the death of Louis Bleriot, the first pilot to fly across the English Channel, Michel de Lagarde and Antoine Delafargue will be making their dream come true: that of crossing the English Channel in a human-propelled submarine. This exploit, inspired by Jules Verne and Tintin, has never been achieved. The expedition, which has been prepared for eight years, consists in pedalling the submarine more than 18 hours per day for 7 days from Plymouth to Saint-Malo, i.e. almost 250 km through zones of strong currents and discarded ammunition dumps, by following the bottom of the sea at depths of up to 100 m.

The 6 m long, pedal-powered submarine, which will be entirely self-sufficient, without having to surface, will be piloted in shifts by Michael de Lagarde and Antoine Delafargue. Their daily individual caloric expenditure will be the equivalent of that spent by a cyclist during one stage of the Tour de France! In a space of less than 2 m³, the two co-pilots will have to strictly control their physical effort, the water pressure on the submarine and the oxygen supply. “This is not the first crazy project I’ve done with Michael; we and our friends at the Polytechnical Institute at the time, flew a Montgolfier balloon in a cave.” explains Antoine Delafargue.

Two support boats will be plotting the track of the submarine in real time via a transmitter and following it to forestall risks due to maritime traffic. They will take it in turns to contact the crew of the submarine every two hours.

A technological challenge to save energy and the environment

The first autonomous, pressurised, human-propelled submarine, capable of diving to 300m in depth, will move forward at a speed of 1.5 knots, in other words 2 to 3 times slower than a person walking. Sponsored mainly by Delair-Tech, this pocket submarine, a technological marvel, was designed as an ode to sober power consumption. Another aim of the expedition is to explore the bottom of the sea, particularly of the English Channel, from a new perspective. The submarine exploration will take place at a leisurely pedalling pace with no sound of an engine, enabling the crew to take pictures for researchers, of the benthic fauna and flora, in collaboration with the Maison des Océans in Paris and the Oceanography museum in Monaco.

Delair-Tech soutient ce projet en apportant son expertise et ses technologies

As co-founder and CEO of Delair-Tech, Michael De Lagarde, co-pilot of the expedition, has enrolled his company's engineers to meet the challenge. As a sponsor, Delair-Tech has, in particular, developed the on-board navigation system. Since the GPS signal is not available under the water, the Delair-Tech engineers have thus perfected an innovative system based on inertial navigation and an optical speed sensor. This consists of a downward-pointing camera which takes photos of the sea bottom every few seconds and then calculates the relative displacement of the submarine in relation to the sea floor by means of a specific algorithm, thus deducing the trajectory of the vessel throughout its crossing.

"Delair-Tech has for a long time been specialised in navigation systems and on-board image processing, so it was quite natural to call on our engineers to provide technical support for the Pilot Fish Project. We're proud to see Delair-Tech technologies being deployed in the submarine world," says Michael De Lagarde.

About Delair-Tech

Delair-Tech, a world leader in professional drones, facilitates company decision-making thanks to its long-range drones. The start-up, founded in 2011 by 4 French engineers, makes unique data available to professionals; the data are collected and analysed by the only drones in the world certified for flight operations even when they are no longer visible to their pilots. Delair-Tech also offers an integrated data processing solution to facilitate decision-making for manufacturers. Already active in about 30 countries, Delair-Tech has a workforce of more than 60 employees and intervenes in several fields such as agriculture, linear structures, power supplies, mining and the building industry.

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