View this email in your browser

WELCOME ADDRESS

Welcome and message from the MAREWIND coordinator

Lurederra Centro Tecnológico

Dear MAREWIND community,

In offshore wind, one of the main challenges that we are facing today is to increase the lifetime of functional and structural components whose materials and coatings suffer numerous damages. In addition, corrosion and fatigue further affect the lifetime of the offshore structures where environmental factors such as wetness, UV-radiation, abrasion and erosion have already created severe damage. To solve this problem, MAREWIND is working to extend the service life of the wind facilities with new advanced durable materials and recyclable solutions.

After two years of intense and exciting work, the MAREWIND project is halfway to achieving its ambitious goals. To date, the consortium has joined forces to develop anticorrosion coating for key metallic elements and fouling-preventing coatings for different materials of submerged offshore structures. In addition, we have also selected the wind turbine blade coating for trials and new technologies for predicting corrosion and modelling are being elaborated. Moreover, within the improvements regarding the durability of materials, MAREWIND project also develops high performance concretes (UHPC) as well as new reinforced composites, including recyclable materials in the novel compositions. Thus, before moving on to the final

demonstrations, the MAREWIND activities are focused on the validation of the formulations developed at laboratory scale in a real environment, implying upscaling steps and optimisation of application techniques.

During the second half of the MAREWIND project we will continue working to solve the technological, economical, business and societal challenges Europe is facing today. Our innovative solution will establish technological base for competitive offshore wind farms constructions, exploitation and maintenance in Europe. And, we will contribute to allow offshore wind energy to become the cheapest source of electricity.

Let’s continue working together to achieve the net zero scenario by 2050 and accelerate renewables growth!

Figure 1: On 16th and 17th November 2022, the MAREWIND consortium met in the headquarters of Lurederra Centro Tecnológico in Los Arcos (Navarra, Spain) to discuss the 2-year progress of the project.

TWO-YEAR PROGRESS

The MAREWIND project as leader towards a more sustainable and circular offshore wind sector

During the last months, the MAREWIND project has made great strides towards the validation of the developed samples. At present, the natural step is the validation in a real environment where formal controlled testing will be performed to ensure that the materials developed satisfy the expected requirements.

The consortium has started the work in real exposure and also with samples with real materials and morphologies, enabling relevant validation.

Figure 2: Bigger and real samples: real fastening elements coated with anticorrosion protection or non-coated, samples of real structures being coated with antifouling and new concretes developed.

As part of the validation activities, final optimisations of the selected formulations are being carried out in order to maximise the properties of the novel solutions developed.

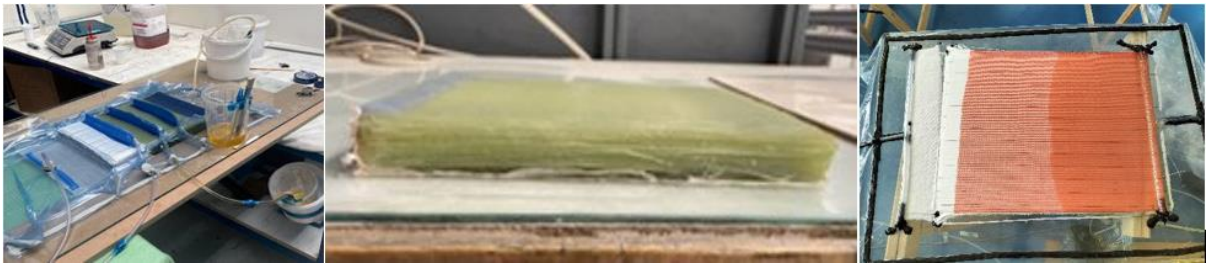

Figure 3: Fine-tuning of reinforced composite materials.

The scale-up of formulations includes the progress regarding liquid nanocoating production as well as novel concrete or composite fabrication.

Figure 4: 20L reactor of antifouling coating and EIRE-epoxy demonstrator webs

After having performed all laboratory tests, the MAREWIND project is currently gradually moving to a real environment.

Figure 5: Floating design of UHPC structure validation for the manufacturing of the relevant scale prototype for its testing in the wave basin at EUMER facilities and real environment durability testing of UHPC at ACCIONA Harbour demosite.

Up to now, the tests performed have showed excellent results. During the upcoming months, the validation activities described will be monitored to get the MAREWIND technology to the next stage of the process, the final demonstrations.

READ FULL ARTICLE

MAREWIND IN A NUTSHELL!

UPCOMING EVENTS

EUSEW 2023 - European Sustainable Energy Week
When: 20-22 June 2023, Brussels
More information here**.**

For updates on future events visit the MAREWIND website,

MEET THE CONSORTIUM

Read more

FOLLOW US FOR MORE UPDATES!

Want to change how you receive these emails?
You can update your preferences or unsubscribe from this list.