REPOL AND GAIKER – IK4

THE PERFECT UNION IN R&D AGAINST SEA CORROSION.

The OCEANIC project explores the development of anti-corrosion and anti-fouling coatings for structures in contact with sea environments. This project is a part of the ERANET proposal stage within the Horizonte 2020 European program.

Both Grupo Repol and Gaiker-IK4 technology center have joined forces to create a special coating against sea corrosion. The OCEANIC program arises from Grupo Repol's continuous search for new materials for specific needs, and provides an extraordinary improvement capacity in all applications. Therefore, the R&D department at Grupo Repol has actually turned a problem into an original solution by developing a polymer which is compatible with an anti-fouling molecule, which is integrated in the polymer acting as a coating, and providing surfaces which are in contact with sea water with a resistance capacity of up to 20 years.

This European project is also participated by the Swedish Research Institute SP (coordinator of the project), final users of these technologies, such as CORPOWER and MIKRA, IK4-AZTERLAN, expert on anti-corrosion systems and measures, REPOL and GAIKER-IK4 (who will develop the anti-fouling added material), SKANDINAVISK YTFÖRÄLDING, experts on TSA, and WaVEC, Portuguese Institute for the development and testing of sea platforms.

The OCEANIC project approach is based on combining two different solutions in a new, sustainable "non-paint system" concept, which results in a long-term corrosion and fouling protection. On the one hand, the thermal spraying of aluminum (TSA), which provides corrosion protection when there is a special need for protection against long-term corrosion with no re-painting possibility, and whose main promoter has been the oil and gas sector (O&G). On the other hand, the low-emission anti-fouling, which has become an innovative approach to anti-fouling. This concept applies especially to sea transport sector.

Both a trans-national and a cross-sectorial impact is expected, thus providing technologies and structures involved in the sea sector with increased reliability and durability, and becoming a sound support to O&G.

The advantages of the product are quantifiable, as it reduces process and maintenance costs thanks to its increased sustainability.

The most remarkable characteristics, environmentally speaking, are:

. The coating system features low environmental impact, is long lasting and has an anti-fouling efficiency level higher than all the other systems currently in use (vessels require maintenance processes every 5 years, or even more often than that).

. The material provides effective protection for the components of those devices used for sea energy collecting. This sector is expected to grow considerably over the coming years, and this will help develop alternative energies.

. It also significantly reduces costs in the maintenance of these infrastructures, and helps therefore protect the environment.

Applications are varied and wide reaching:

. Vessels, docks, buoys, oil and gas platforms, as well as any other type of platform which is in contact with sea water.

. All those elements used for extracting energy from the ocean, whose maintenance is practically impossible on-site, and which have to ensure 10-20 years lifespan.

Grupo Repol has a great competitive advantage in the OCEANIC project, and continues to lead a clear idea of the role of R&D&I in order to become a benchmark in the sector.

GR Grupo Repol
Engineering plastics

Contact