COMMUNICATION HUB FOR THE WIND ENERGY INDUSTRY

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The push towards renewable energy is not new, but its acceleration to increased implementation is moving at great speed

COP26 kept the pressure on the move to reduce our dependence on coal, gas and oil and instead look to the greener future of renewable energies, a continuation of the pledge made in 2015 and looking towards the net zero emissions targets of 2030.

With rising energy costs across the globe dominating household expenses and sustainability a priority for businesses, energy that can be harnessed from earth's elements is coming more and more into focus. Add to that the recent actions of Russia in Ukraine which have put a spotlight on the need to reduce dependencies on energy supplies from overseas.

The energy mix needs to change and offshore wind will play a significant part in the future.

RENEWABLE INDUSTRY INVESTMENT

Investments in wind energy alone have exploded recently; the offshore wind lease sale off the coast of New York fetched over \$4 billion, a major step in the US push to renewable



energy. The UK government announced in March it is aiming to triple the number of solar panels, more than quadruple offshore wind power and double onshore wind and nuclear energy by 2030.

Earlier in March a new study revealed that the Asia-Pacific region's wind energy sector could soon account for nearly a quarter of their power this decade, with China set to be the largest market by 2030.

CORROSION PREVENTION AND MAINTENANCE

Those are some incredible goals and as we know, these enormous growth targets will make for more and more installations, and with that growth comes the need for corrosion prevention and maintenance.

Increasing offshore wind energy installations takes advantage of the power of the wind produced at sea, moving at a much higher and more consistent speed thanks to the open space and absence of structures. What is a benefit to production, however, poses a logistical disadvantage to construction and maintenance along with an aggressive corrosive environment?

DEEP WATER INSTALLATIONS

In recent years offshore installations have been located near the shore in predominantly shallow waters, the next few years will see a move to deep water installations further away from the coast, as space becomes an issue. These developments will see stronger winds and bigger waves, adding pressure to not just the installation phase, but ongoing operation and maintenance.

On an offshore wind turbine, corrosion can creep into many different areas monopiles, ladders, walkways, boat landings, guard rails and rotor heads and compromise the overall integrity of the structure. Protective coatings that can be applied to prevent corrosion from developing, or halt its progression, are essential to providing long term asset protection.

A major area of consideration is surface preparation. The need for aggressive blasting to apply protective coatings is a burden in these confined and hostile environments, let alone the contamination to surroundings. Preventative coatings that can mitigate this issue are a major step forward, combining ease of application and minimal manpower whilst offering benefits to time, longterm protection, costs and production.

PROVIDING ASSET LIFE EXTENSION

Easy-Qote is a polymeric coating that was developed based on the

idea a corrosion solution could be applied simply as a patch rather than painting or spraying. It is a self-cleaning corrosion preventive patch designed for single-layer application, touch-up and spot-repair of existing coating systems. As well as being an environmentally and worker-safe alternative to traditional coating systems with no VOCs it can be applied at a wide range of temperatures from -10 to 48'C

What makes Easy-Qote so different to traditional protection methods is the simplicity. In traditional approaches we would see a variety of materials and equipment brought to site: surface preparation tools, coatings and application tools, rope access equipment and PPE. All brought both to and from the site with post-disposal regulations to be met.

COSTS REDUCTION

In the case of Easy-Qote, one individual or small team is armed with a wire brush and a roll of patches. Simply brush loose corrosion away, apply the patch and return to base. No blasting is required avoiding the all-important issue of environmental contaminants. Overhead costs will be greatly reduced with transportation and manpower costs down. Instead, protection is immediate and with a



service lifetime of 25-30 years, the asset can now reach its full potential with long term protection.

There are many situations that require the ability to remove the existing protective coating for maintenance, such as addition of new structural bolting, welding or steel repairs or simply moving parts of the structure (such as a hydraulic fitting). With minimal surface preparation, Oxifree TM198 is applied in a fluid state and quickly conforms to the asset shape, protecting these critical areas from corrosion spread.

Additionally, the coating can be applied in-service at elevated surface temperatures, allowing equipment to remain operational during application. In use on turbines both on and offshore and on transmission platforms, TM198 can provide long term protection that will also allow for inspection with UT.

With both Easy-Qote and Oxifree products available, Seal for Life is committed to helping the wind energy industry reduce failure from corrosion issues, improve productivity, longevity, and as a result, make renewable energy truly sustainable.

Seal For Life Industries

