film-ocean
innovative subsea solutions
www.film-ocean.com

A complete ROV solution for Wind, Wave and Tidal

Film-Ocean has been supporting their offshore customers since 2004, more recently providing subsea survey, inspection, repair and maintenance (IRM) services to the offshore wind sector. The company is committed to supporting clients through the energy transition journey, supplying bespoke solutions delivered by its wide-ranging fleet of ROV systems and associated tooling.

With a range of ROV systems from heavy work class to helicopter transportable micro ROV, Film-Ocean's extensive ROV fleet delivers high quality, reliable and cost-effective solutions. The ROV systems are supported by Launch and Recovery Systems (LARS) and Tether Management Systems (TMS) designed with efficiency in mind, delivering first class survey and IRM services. The fleet also includes several patented subsea tools including mooring chain measurement systems, used globally to monitor the in-service condition of subsea mooring chains.

There are two categories of offshore wind turbines; fixed and floating. Fixed installations operate from depths of up to 30m for monopile structure or up 60m for multiple piles; floating structures can be installed in greater water depths. Both installation types need regular inspections to monitor structural conditions.

With the ongoing growth and expansion in offshore renewable energy in Europe and internationally, it is an important market for the business and Film-Ocean has its sights set on further expansion within the sector.

The versatility of ROV Support

As with oil and gas, the offshore wind sector also has a need to undertake surveys and observational operations during the construction phase, followed by regular IRM services. Film-Ocean has over 16 years of proven experience and expertise working on offshore projects in both shallow and deep water and working in challenging sea conditions with low visibility. Environmental conditions often impact offshore renewable structures and associated assets.

UXO (unexploded ordnances) also present a challenge for offshore operations; it is estimated that there could be tens of thousands of UXO in UK waters due to the legacy of wars and test-firing. UXOs that remain on the seabed are a potential risk for offshore construction, i.e. offshore wind. Therefore, managing the UXO is critical to a project's success and more cost-effective to mitigate the risk during the initial phase of the project.

Asset management of offshore wind infrastructure is critical for safe and cost-effective operations as it ensures that regular inspection and monitoring operators are equipped with precise data to make informed asset management decisions.

Film-Ocean's ROV's are at ease working at the different depths required by both fixed and floating structures and are flown by expert pilots with extensive experience operating in harsh and sometimes challenging environments. Every project is managed and supported by a team of highly experienced and skilled support engineers, project managers and offshore personnel.

Film-Ocean's ROV services are designed to support a range of work scopes for offshore wind infrastructures. The support services include pre-construction seabed surveys, inspecting and cleaning subsea infrastructures, turbine or substation foundations, cathodic protection inspections, anchor placement, cable inspection, cable survey and maintenance, UXO surveying, and other operations relating to the construction and maintenance of offshore wind assets and infrastructures.

Additionally, the company develops and deploys project-specific tooling. For example; an offshore wind operator needed to perform an inspection of the circumferential welds on the wind farm's monopiles. The offshore wind farm was located in the Southern North Sea with strong tidal flow resulting in sub-surface current and poor visibility, all of which made the operating conditions difficult. The monopile also had limited services requiring all equipment to be mobilised to the work location.

The solution deployed by Film-Ocean included an inspection class ROV system and the development of bespoke standalone tooling addressing the project's specific requirements. Film-Ocean developed a hydrostatic suction system that was integrated into the inspection class ROV to aid station-keeping while the automated non-destructive testing (NDT) was in operation. Weight saving methods were applied on both the ROV and tooling with project-specific buoyancy integrated into the system to allow for ease of operations.

To address the high sub-surface current and low visibility, Film-Ocean deployed the tooling equipment from within the monopile where the environmental conditions were as not affected by external conditions.

Film-Ocean's offshore ROV services are ideally suited for Offshore wind, with a range of ROV from micro to work class systems, their fleet offers a flexible solution subject to the project requirements.

Scott Jenney, Film-Ocean's CEO, said: "The world's energy needs are evolving, and renewable energy can no longer be thought as being the future, it is part of the present. Film-Ocean has a long history of providing innovative subsea solutions to the oil and gas industry, and this knowledge and expertise are transferable to the offshore renewable sectors. With our experience and expertise inspecting floating assets, and in particular mooring systems, floating wind is a sector that we feel we can provide value and form long term partnerships."

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