



A Global Leader with unrivalled experience in designing, certifying and delivering the industries most innovatice cathodic protection systems.

**OES Group** is the markets chosen partner for protecting offshore wind foundations from corrosion.

# Offshore wind cathodic protection systems

The offshore wind industry is currently expanding at a rapid pace. The capacity of offshore wind turbines is increasing and the industry is venturing into deeper waters to harness wind power more effectively.

As the reach extends into deeper marine territories, the durability of foundations becomes crucial for sustaining momentum. The lifespan of wind farms is extending, which presents difficulties for conventional cathodic protection systems. In response to these challenges and the goal to minimize secondary steel usage, **OES Group** is leading the charge in innovating, crafting, and delivering the next generation of Cathodic Protection systems for the worldwide offshore wind market.

### **OES Group** Leading the market in corrosion protection



**OES Group** stands at the forefront of safeguarding offshore wind foundations globally. Our team, enriched with highly and experienced skilled protection experts, excels in the bespoke design, certification, and provision of Cathodic Protection systems. are engineered to systems longevity and ease of management, protecting the valuable assets of our clients. Our leadership team features expertise and qualifications in corrosion control across all types of foundations within the offshore wind sector.

From the beginning, we engage closely with owners and designers, pinpointing the most technically sound and costeffective solutions that align with the specific requirements of each project. Our Impressed Current Cathodic Protection (ICCP) System sets the industry standard for reliability, crafted entirely within our UK and Dutch manufacturing facilities to deliver top-tier ICCP systems suitable for a diverse range of foundation types. As the industry evolves, OES Group remains committed to leading through innovation, addressing contemporary challenges to enhance the durability, sustainability, and reliability of our solutions.

#### **Foundations**

**OES Group** specializes in the design and delivery of ICCP Systems that accommodate every type of foundation. We prioritize designing and delivering systems that require minimal secondary steel and have streamlined interfaces for external protection. Our systems are engineered for quick deployment and activation, offering internal protection efficiently.



#### **Monopile foundations**



**Jacket foundations** 



**Floating foundations** 

## Products & Services

#### **Design & Ceritification**

We provide comprehensive support for your Cathodic Protection system design, encompassing cost strategy, CP design, and the installation process. Leveraging the latest industry standards, site data, and our proprietary polarization curves, we ensure the certification of your Cathodic Protection System is seamless and straightforward.

#### **Installation & Commission**

When implementing our ICCP system, we provide full support and training to the facility. Alternatively, we can manage the entire installation through our skilled electrical and Cathodic Protection team, all certified by GWO. This guarantees a comprehensive system warranty and peace of mind for our clients' projects. We assist with offshore installations and handle the full setup of our internal Cathodic Protection systems, including the installation of our internal anodes. After installation, we carry out commissioning of our systems, both onshore and offshore, to ensure they perform as expected.



#### **Manufactering ICCP**

We lead the market in producing ICCP systems. Our TiMMO ICCP anodes are of unparalleled quality, crafted from the purest materials in the platinum precious metals group. Each anode receives multiple coatings, undergoes a thorough curing process, and is checked with rigorous quality control to ensure peak performance while considering the environmental impact of your project. We manufacture all anode supports in-house, adhering to strict Welding Procedure Specifications (WPS), and they are inspected by independent Non-Destructive Evaluation (NDE). Our Transformer Rectifier Units (TRU) are primarily Switch Mode with Auto Potential, uniquely designed to include multiple TRU modules with independent controllers for system redundancy in case of failure. Our systems are powered by the industry's most precise and durable reference cells, exclusively using AgAg/Cl to eliminate the instability associated with Zinc reference electrodes.

#### **Service**

A major advantage of our ICCP system is its capability to transmit feedback data via SCADA. **OES Group** provides complimentary monthly and quarterly lifetime diagnostics. Thanks to our specially designed shunts and modular TRU technology in our controllers, our system can automatically identify potential issues. The **OES Group** is committed to supporting the operation of the system throughout the lifetime of our clients' assets. As the end of life approaches, we can propose a Cathodic Protection strategy and evaluate options for extending the asset's lifespan.

#### **CP Modelling**

We provide in-house Cathodic Protection modeling for both new and existing projects to predict system performance beforehand. Conducted by a CP Engineer certified according to EN 15257 standards, we optimize the project's CP system to guarantee its best performance.

