

Powering electric innovation below the surface

Engineering buoyancy performance for Saab Seaeye SR20 eWROVs



Challenge

Saab UK's Seaeye SR20 electric work-class ROV (eWROV) represents a major step in sustainable subsea operations.

Designed for residency, remote operation and seamless deployment from uncrewed surface vessels, the SR20 fleet will support offshore energy, infrastructure integrity and ocean science missions worldwide. A full-sized IMCA Class III B ROV system, the SR20 exceeds the overall power and performance of a 200hp hydraulic equivalent and is fully electric. Its design reduces oil usage, lowers lifetime costs and improves environmental performance while delivering quieter, more precise operation across surveying, IMR, construction, drill support and decommissioning.

Achieving this combination of power, efficiency and eco-responsibility required precise buoyancy integration. The SR20's electric thrusters and modular manipulators, demand tightly controlled weight distribution, dimensional accuracy and long-term hydrostatic reliability.

For Saab UK, this meant partnering with a UK manufacturer capable of manufacturing and supplying high-performance syntactic buoyancy materials and collaborating closely to ensure seamless integration to the SR20.

“Our partnership with Saab UK goes far beyond supplying buoyancy materials. We work as an extension of their engineering team for the Seaeye portfolio, ensuring every module performs precisely as required within increasingly advanced electric ROVs.

With both organisations manufacturing in the UK, we can collaborate closely, respond quickly and maintain the highest quality standards. Supporting the SR20 programme shows how strong UK engineering partnerships deliver innovative, sustainable subsea solutions at scale.”

STEPHEN SLOAN

Head of Commercial, Base Materials

Solution

Base Materials supplied DNV type-approved Subtec® 3,000 buoyancy material and precision-machined modules for the SR20 eWROVs. Qualified for seawater depths down to 3,000 metres, Subtec® 3,000 provides high strength-to-weight performance, low water absorption and reliable hydrostatic crush resistance, essential for demanding electric ROV operations.

With densities from 385 to 650 kg/m³ and grades suitable for depths up to 11,500 metres, Subtec® combines high-grade hollow glass microspheres with a thermoset polymer matrix, delivering ultra-high strength-to-weight ratios, excellent water ingress resistance and long-term stability. Every batch is rigorously validated in-house, including density, water absorption, compressive strength and hydrostatic testing.

Working closely with Saab UK's engineering team in Fareham, Base Materials supported module optimisation, machining and calibration to meet exact uplift, dimensional and integration requirements. Produced at Base Materials' UK facility, each module underwent buoyancy verification, dimensional inspection and full material traceability before shipment. The UK-to-UK supply chain enabled responsive technical collaboration and alignment with Saab UK's SR20 programme.

This project builds on a wider multi-year strategic partnership. Beyond the SR20, Base Materials supplies buoyancy across Saab UK's Seaeeye portfolio, including Seaeeye Falcon, Seaeeye Cougar, Seaeeye Leopard, Seaeeye Lynx and Seaeeye Panther, as well as refurbishment and life-extension programmes for legacy vehicles.

This integrated approach ensures proven buoyancy performance within one of the world's most capable electric work-class ROVs, engineered, manufactured and delivered through a collaborative UK supply chain.

About Subtec®

With densities from 400 – 650 kg/m³ and grades to suit a range of seawater depths from 2,000 metres to 11,500 metres, Base Materials' Subtec® buoyancy materials comprise high-grade hollow glass microspheres and a novel thermoset polymer matrix, producing ultra-high strength-to-weight characteristics with excellent water ingress resistance.

