



Innovate

Issue 1 March 2018

LATEST NEWS AND INFORMATION FROM SUBSEA ENERGY SOLUTIONS

Welcome!

A warm welcome to the very first edition of our quarterly newsletter "Innovate".

As well as articles about our products and services, we will be including interesting stories about our staff, a bit of humour and the odd competition too.



Philip A.R. Stanyon

Our aim is to give you an interesting and thought provoking ten minute read, just enough time to have a cup of tea and a quick break in the process.

We'd also like to include interesting articles about our customers and friends around the world, so if you have any interesting or funny stories, feel free to email our Editor at jon.naylor@jncs.co.uk.

Just a Bit of Fun



We'll open every newsletter with a bit of a brain teaser for you, just for fun.

See if you can work out what this great big bit of kit is.

You'll find the answer in an article later on in the newsletter.



"I need your menu choices for the Wind Power Energy Conference. Baked beans or chili?"



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A Vast Reduction in Sub-Sea Cable Repair Time

Any system is only as strong as it's weakest link. Offshore wind turbines are very visible upon the horizon, but many people forget the critical link between the generated power and the national grid, the sub-sea cable network.

Despite being designed to be as strong as possible, sub-sea cables can and do fail, and the repercussions for the wind farm owners can be huge, and extremely costly. Some cables fail internally however the majority of failures are as a result of an outside force, be it sharks or ships anchors. When a failure occurs, time is of the essence as every day of lost power generation represents a significant cost. In the past, sub-sea cable repairs have been known to take as long as six months.



With these challenges in mind, Lancashire based high voltage engineering company EDS, designed their Subsea Universal Joint (SUJ). The SUJ can repair a wide range of sub-sea cable sizes from all manufacturers in double quick time. It takes just 48 hours to repair a joint enabling the repair teams to take advantage of narrow weather windows even in the winter time.

With their design concept in hand, EDS approached Subsea Energy Solutions to collaborate with them and bring the idea to life. Using their expertise in designing and manufacturing products for protecting sub-sea cables, Subsea Energy Solutions created the complete SUJ ready for market.



This now means that, for the first time, wind farm operators can invest in a permanent universal repair component as part of their contingency planning; ensuring that a versatile and robust engineered solution is available quickly in the event of cable failure. The versatile unit also dramatically reduces the number of components that wind farm operators will need

to store for emergency repairs, while facilitating much faster remediation works.

Another great example of a collaboration with Subsea Energy Solutions, saving clients considerable amounts of time and money.



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Critical Components for the Latest Wave Power Technology

A cutting edge, multi-million-pound project is underway as we speak off Orkney in the Atlantic. For a considerable period of time, the wave power industry has struggled to create devices that can create sufficient power to offset the initial high construction and installation costs, until recently that is.



For many years, CorPower Ocean AB and founder Stig Lundbäck, studied the principles of the operation of the human heart. He based the design of his Dynamic Adaptive Piston Pump Technology on these principles and more recently CorPower has developed this into a compact highly efficient wave power generation system, generically called the “Wave Energy Converter” (WEC). The WEC converts the linear motion of the rise and fall of the waves, via a buoy into rotational motion that can then generate power.

A half scale system is currently being installed off Orkney involving research partners from Portugal, Scotland, Ireland, Norway, Sweden and Germany. Not surprisingly, all eyes are on this prestigious project and only the very best component suppliers are being used to ensure its success.

Subsea Energy Solutions (UK) Ltd. were approached by Corpower to solve a challenge for them. They required a system to protect the cable termination junction box during deployment and retrieval. The Subsea Energy Solutions SUB-VBR™ Vertebrae Bend Restrictors were just the ticket.

Two ID 90 mm, 2.5-metre-long SUB-VBR™ Vertebrae Bend Restrictors were supplied along with Cable Protection Bellmouth fittings. The systems were manufactured and delivered within 1 week to the CorPower Ocean Ltd facility at Kirkwall on the island of Orkney, ready for installation and deployment.

Just another great example of Subsea Energy Solutions accepting potential contract penalties and delivering the highest quality products on the critical path, for a rapid vessel mobilisation and installation campaign.