



Airgun Umbilical and Lead-In Cable

Custom-engineered marine seismic data acquisition cable systems

As the hydrocarbon industry pushes the frontiers in exploring new territories and optimising ultimate recoveries in existing reserves, they seek swift and adaptable partners prepared to develop and deliver reliable and durable marine cable products to suit a broad range of applications and configurations.

DE REGT Marine Cables products are renowned throughout the world and are in use on all major seismic and survey fleets, engineered and manufactured to exacting standards and proven for

operation in the most challenging of environments. Combined with a commitment to lifecycle customer service, it's easy to see why DE REGT Marine Cables is industry's cable technology partner.

Custom-Engineered Cable Systems for the Marine Seismic Industry

AIRGUN UMBILICALS

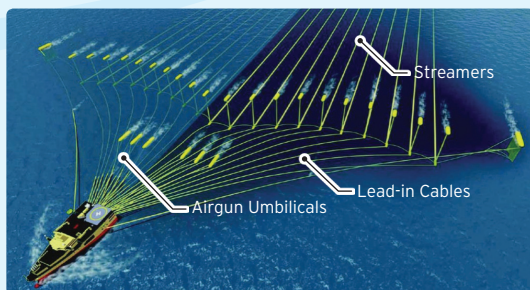
DE REGT Marine Cables has been designing and manufacturing airgun umbilicals for over 25 years and has become one of the world's leading suppliers of this specialist product. Vast experience and knowledge supports our engineering process allowing us to custom-design a suitable gun umbilical for every system. DE REGT Marine Cables production facility at Krimpen, The Netherlands versatile and capable of competitive lead times for virtually all types of gun arrangements - long or short lengths, large or small quantities:

Improved reliability

- Hoses from 1/2" up to 1 1/4"
- Signal lines via (screened) twisted pairs
- Data lines via optical fibres
- Power lines via customer specified conductors
- Steel or textile strength members

Meeting the Challenge

Geophysical technology advancements demand a greater variety of optimised seismic datasets. Typically this requires gathering the data more effectively by increasing and widening the streamer spreads and lengthening airgun umbilicals - sometimes up to 1200 meters. Increased loading on vessel winch systems and dynamic factors affecting



the overall integrity of the umbilicals have become a critical consideration. DE REGT Marine Cables have met this challenge, engineering new manufacturing techniques that reduce the overall diameter and improve the efficiency of the airgun umbilicals, through a combination of advanced materials, methodologies and high-tech signal components. DE REGT Marine Cables can offer custom combinations in armouring packages that withstand the rigours of marine deployment and deliver the optimum in breakstrength. Terminations for the airgun umbilical products are designed and engineered inhouse. DE REGT Marine Cables has dedicated facilities for terminating and testing and is certified to assemble Sercel Syntrak / Seal / Nautilus, ION MSX / Digishot / Digistreamer and Seemap Gunlink terminations.

LEAD-IN CABLES

Cables and umbilicals used for offshore hydrocarbon exploration and oceanographic research generally operate in the aggressive surface zone and are subjected to the most physically demanding conditions. Product performance and reliability is critical to efficient and economic data acquisition. DE REGT Marine Cables is the frontrunner in design and engineering of reliable and durable lead-in systems, which incorporate both strength, data and power transfer into small diameter cables. Often, lead-in cables are designed in close cooperation with customers in order to achieve the optimum

configuration for strength and signal / power distribution, whilst maintaining minimum outside diameter.

Delivering Benefits to Industry

DE REGT Marine Cables continue to lead the field in cable developments, working closely with seismic operators, engineering lighter cables to ever smaller diameters. These efforts deliver benefits across the seismic industry, recognising the need for increased data acquisition at an economically viable pace. All lead-in cable terminations and fairing applications are performed inhouse, providing a turnkey solution to our clients. For new applications, DE REGT Marine Cables have significant experience in performing desk studies, developing trial products and running qualification tests. DE REGT Marine Cables flexible approach to each project requirement encourages client partners to consider new techniques and engineering methods that enhance the performance of the product. Through DE REGT Marine Cables, customers can access the extensive portfolio of product research, design, engineering, manufacturing, specialised testing and integration capabilities. With facilities located worldwide, DE REGT Marine Cables also provides a range of research, design, engineering, manufacturing, specialised testing and integration services.

After Sales Support

With such a wealth knowledge, product experience and a commitment to lifecycle customer service, it is no surprise that DE REGT Marine Cables is the marine seismic industry's cable technology partner. The offer extends beyond design and manufacture, providing access to a worldwide resource of qualified expertise, best practice and certified service and repair support.

DE REGT Marine Cables is a leading worldwide provider of custom designed and manufactured umbilical systems and specialised marine cables for a broad range of applications in the oil and gas sector, seismic and defence market and the growing offshore renewables industry.

For more details on DE REGT Marine Cables capabilities and services please contact: DE REGT Marine Cables B.V., Zaag 2-4, 2931 LD Krimpen aan de Lek, PO Box 2100, 2930 AC Krimpen aan de Lek, The Netherlands, T +31 (0)180 668 800, E info@deregtcables.com