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World's Largest Braided Rope

Plasma® HMPE rope created for heavy lift operations

The Challenge
A European client needed to create an enormous lifting sling, but the lifting requirements exceeded the manufacturing capability of most providers.

The Solution
The best solution to the problem was PLASMA® synthetic fiber in a 12x12 braided configuration; only available through Cortland.

This unique rope was created from more than 52,000 individual Plasma yarns using Cortland's 12x12 braiding technique. This exclusive braiding process combines individual 12-braided ropes into a finished 12-strand rope of exceptional strength and flexibility. The finished size of this particular rope was 168 mm with a minimum spliced tensile strength of 1893MT.

Despite the exceptional size, this rope is 7 to 8 times lighter than a comparable steel rope, yet is much easier to handle and splice. The rope was used in a grommet configuration with an MBL exceeding 3044MT for heavy lift operations.

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Project
Heavy lift rope in grommet configuration

Location
Germany

Technologies used
Plasma® 12-Strand synthetic fiber 12x12 braided construction

Features
- Low creep
- Lowest stretch
- Soft hand
- Torque free
- Easy splicing
- Neutrally buoyant in water
- Select sizes are ABS & DNV type approved

"Cortland was selected as the preferred provider based on our expertise and recognition for our customized solutions and our complete portfolio of products and services, including testing and certification. We were able to deliver a custom-built solution that surpassed the manufacturing capabilities of many other providers."

Randy Longerich, Cortland Company

Cortland is a global designer, manufacturer, and supplier of technologically advanced ropes, slings, and strength members. Collaborating with customers, our team uses its experience in high performance materials and market knowledge to transform ideas into proven products.
cortlandcompany.com

CORTLAND®

The Plasma® Process
Plasma® 12-Strand is the highest strength synthetic rope available and is the culmination of 25 years of engineering expertise in the HMPE industry. Our dedication to providing customers with industry-leading synthetic line is and always has been the goal.

The Plasma process is especially effective in medium to large diameter ropes where strengths are over 50% higher and creep is significantly low. Its soft, torque free braided construction provides easy handling.

12x12 Braided Construction
The 12x12 construction is designed specifically for high modulus, high strength fibers such as Plasma®, Toro™, BOB®, and Vectran®. This construction addresses the most critical properties of the fibers to provide a very high strength translation efficiency for larger ropes. This design allows for long lay lengths, making the rope more flexible for bending applications and rope that is easy to inspect and can be quickly spliced using standard 12-Strand splicing techniques. Plasma 12x12 is a 12-Strand single braided rope in which each of the 12 strands is, in turn, a 12-Strand rope, or braided primary strand.

For more information visit cortlandcompany.com.