When the port operators for Europe’s second largest steel producer, Corus, requested a new type of synthetic sling for repetitive lifting of steel coils, they received a pleasant surprise. Slings – produced by Unitex – and made from Dyneema® fibers. DSM invented the HMPE gel-spinning process to manufacture Dyneema®. Lifting slings made with Dyneema® fibers are quickly proving to be an attractive alternative to steel wire, chain or polyester slings.

Round slings made with Dyneema® deliver easier, safer, more cost-effective operations at Corus

Slings made with Dyneema® not only are just as strong as the alternatives, they also weigh less (easier to handle), have higher stiffness (no elastic response while lifting), are smaller in diameter and exhibit excellent longterm properties (tension and bending fatigue, UV and chemical resistance).

The Ultralift™ slings were made by Unitex, a leading manufacturer of synthetic slings, specializing in producing slings for all lifting and lashing applications.
The job made easier…. with slings made with Dyneema®

According to Jos Molenaar, Manager Services, Harbor Logistics and Transport at Corus, “When we first made contact with Unitex, they indicated what was possible with the 20-ton slings. It couldn’t have come at a better time. “Like most companies, Corus was using steel-wire slings for loading and unloading all kinds of bulk cargo, including coils. Using steel-based slings, however, presents some serious disadvantages. Their massive weight hampers ergonomic handling and often requires two workmen to handle them. “And that was one of our biggest problems,” says Molenaar.

Willem Legebeke, Team Leader Stevedore at Corus, agrees: “The lifting tackle we were using was so cumbersome and heavy that it frequently caused back problems for the workers. Then we discovered round slings made with Dyneema® which makes the job considerably easier. Comparing the weight of this sling to the steel-wire sling that we previously used, we naturally opted for the sling made with Dyneema®. It proved to be a perfect piece of equipment. It is easy to handle and it makes the job much easier. In the past, we’d handle between 300-350 rolls with a steel-wire sling. With round slings made with Dyneema®, we handle over 1,000 rolls. That’s a significant difference.” Using steel-based slings can also damage the goods that are being handled.

“Many customers are critical about damage to the winder hole and side of the cylinder,” says Molenaar. “But the slings made with Dyneema® barely affect the cylinder, which means there are virtually no rejects at the customer’s end.”

When Safety is Paramount

One of the big advantages of a sling made from Dyneema® is its light weight. The slings that Corus are still using weigh as little as 13 kg, and can replace standard steel-wire slings weighing up to 100 kg each. “These lightweight slings made with Dyneema® allow us to provide the safest possible working environment for our employees,” says Thijs Terwogt, the Safety Officer at Corus. “Working with slings

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made from Dyneema® fiber reduces physical stress for our employees, and improves their safety and well-being. In the past, the kind of injuries we encountered when using the old steel braided wire or sling were mainly back related. Now, with the lightweight round slings made with Dyneema®, we hope to see a significant decrease in that type of injury type in the future.

Steel-wire slings were also prone to fraying after prolonged use - hooks would appear along the sling, posing a high risk for hand and other body injuries. “With round slings made with Dyneema® there is no possibility for this to happen,” continues Terwogt. “so we don’t get injuries to the hands. Using these slings is a huge improvement, which will lengthen the period of time that people can do this physically hard work. As Safety Officer for Corus I have no hesitation in recommending replacing the old steel-braided wire sling with round slings made with Dyneema®. It’s a huge bonus for the well-being and health of our employees.”

Developing Cost-Effective Solutions
Bart Hoeijenbosch, International Product Manager at Unitex is very satisfied with what he can supply Corus. “We knew that our Ultralift™ round slings made with Dyneema® fiber are extremely resistant to cuts and abrasion. Our biggest challenge, however, was to develop a round sling in cooperation with DSM and Corus. The experience has taught us that cooperation between these kinds of companies will always lead to the best possible solution for any lifting jobs. We have now developed a coil sling with two parts: a round-sling with a light-duty sleeve and, over both legs, a heavy-duty sleeve. This offers a cost-effective concept to Corus where they can quite easily replace a part of the roundsling without having to throw away the complete sling. With the Ultralift™ core sling made with Dyneema®, Unitex offers Corus the best possible solution for better health and safety, more durability and lower costs per lift.”

One final thought from Jos Molenaar: “When you add everything up, the costs in terms of human health and safety, the increased loading speed, the productivity, and costs for materials, I am convinced that it will be cheaper per lift to use the round slings made with Dyneema®.”

Clearly, slings made with Dyneema® have made a difference for Corus. Find out what they can do for your operation. Visit www.dyneema.com
About Corus
Corus is Europe's second largest steel producer with annual revenues of around £12 billion and a crude steel production of over 20 million tonnes, primarily in the UK and the Netherlands. Corus comprises three operating Divisions, Strip Products, Long Products and Distribution & Building Systems and has a global network of sales offices and service centres, employing around 42,000 people worldwide. Corus is a leading supplier to many of the most demanding markets around the world including construction, automotive, packaging, mechanical and electrical engineering, metal goods, and oil & gas. With innovation and continuous improvement at the heart of its business performance, Corus aims to create value by offering a differentiated product range supported by unrivalled customer service. Corus is a subsidiary of Tata Steel, the world's sixth largest steel producer. With a combined presence in nearly 50 countries, the Tata Steel Group including Corus, Tata Steel Thailand and NatSteel Asia, has approximately 80,000 employees across five continents and a crude steel production capacity of over 28 million tonnes.

About Unitex
Unitex, the Unitex Group, is an international trading name for a group of companies and comprises two operating divisions Industrial Webbing and Finished Products and has a global network of sales and manufacturing centres in Asia, Europe and the United States of America.

Unitex is a leading manufacturer and supplier of narrow fabrics, web slings, round slings, lashing systems and height safety products. With a wide variety of products, innovation and continuous improvement Unitex fulfills the market demands and creates value for its partners in a value chain with ever changing standards and requirements.

Ultralift™ is a trademark (application) owned by Unitex Group.

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