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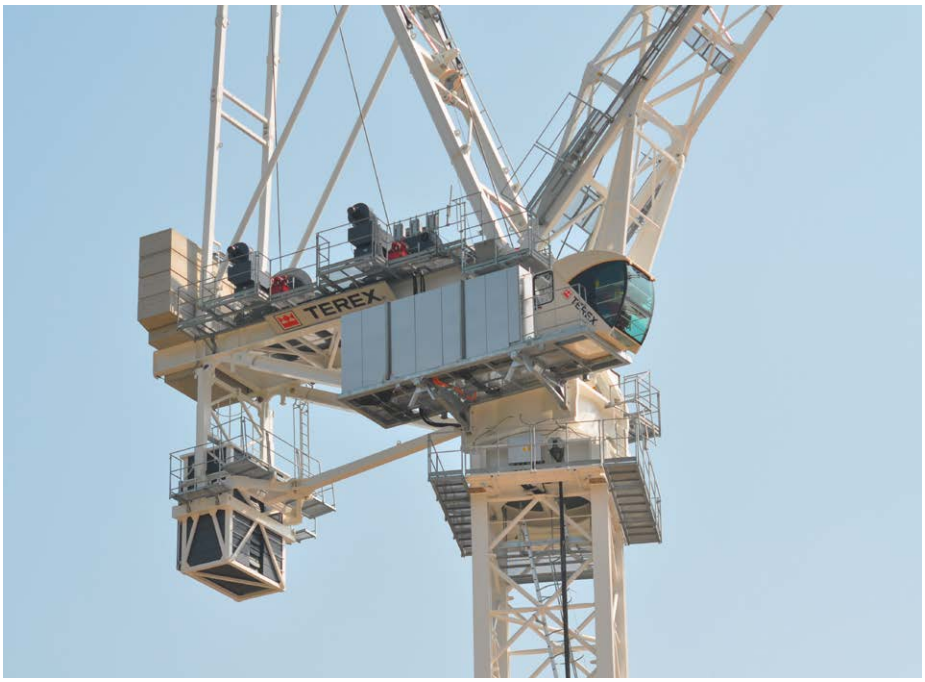
world of rope



CASAR high-performance rope in new Terex luffing jib tower crane

The latest trend on the world's major construction sites points in just one direction, and it follows the Olympic concept "Faster, Higher, Stronger". Modern rotating tower cranes must face these challenges and master them with refined technology. The new CTL 1600 luffing jib crane by Terex was tailored specifically to these requirements. Impressive 66 t of maximum lifting capacity resulting from a load torque of 1600 mt as well as a maximum jib length of 75 m and an 89 m detached tower speak for themselves. This makes the CTL 1600 the largest tower crane ever build by Terex in Italy.

It is evident that great value was placed in the optimal choice of critical crane components for this giant. Safety and reliability in operation are top priority of course; any problem could quickly cause time- and cost-intensive operational disruptions. This must be prevented by all means with regard to the tightly scheduled process flows. When selecting rope, Terex did not make any compromises and chose 2 approved rope constructions by CASAR.

The crane specialists installed a EUROLIFT 34 mm in diameter and 600 m in length on the hoisting unit. This rope construction is highly

Blake Chandler
WireCo WorldGroup
Senior Vice President Sales

As I hope you will notice, this issue of World of Rope includes an update on the newly established WireCo Crane Center in Gouda. We revealed the opening of the WCC last April and now we are pleased to announce that this new Center is fully operational. The Center has allowed us to add scale and speed, while also centralizing our crane customer care and technical staff in one location. We are already witnessing major improvements in our product availability and shipping times due to the convenient location of the WCC, and we look forward to adding new products and services in the future. Thank you for your continued feedback and guidance as we work to meet the needs of our customers.

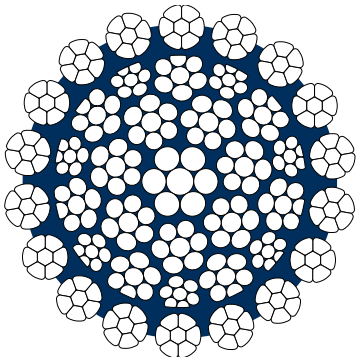
Sincerely

yours

resistant to torsion due to 18 outer strands and a tightened core rope laid in the opposite direction. The torque of the individual strands seem to be opposite in operation. Special wire ropes by CASAR take this physical law into account to the extent that the torques of the internal and the external strands compensate each other even in a high lift range. Many users also value the good handling of this flexible rope construction as well as the excellent coiling on multiple-layer drums.

A PARAFIT with a diameter of 30 mm and a length of 330 m is used for the luffing gear. The double parallel quality of the rope and the swaging process carried out after the closing of the rope achieves extremely high breaking resistance. In addition, the smooth surface offers great benefits for coiling and, combined with the strong compression in the rope, also maximum protection against cross-section deformation. The excellent product features are complemented with the plastic-coated rope core, which increases the rope's stability, absorbs shocks and also protects the rope's interior against moisture and penetrating soiling. This hammered rope offers optimal features specifically for retracting winches.

Ricardo Alba, construction manager for Terex rotating tower cranes, was very pleased with the running tests, and the first cranes will soon be shipped to the world's major building sites.

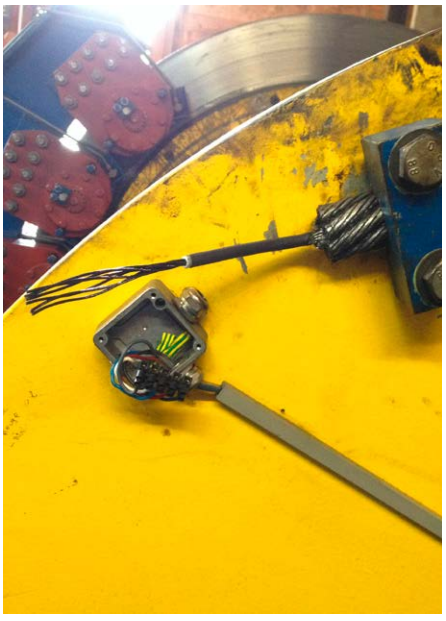


Sectional view of CASAR Eurolift

DUROPLAST controls and pulls Swiss haul cable car

In June 2014, Günter Knerr, Director of technical customer support Europe, and Marc Bode, a sales employee responsible for Austria and Switzerland, attended the installation of the first CASAR Duroplast whose interior is permeated with an electric conductor. The rope is designed to move fixed-track cable cars in the lower third of the supply tunnel of the storage power plant Salanfe. This tunnel connects the reservoir 1,925 m above mean sea level with the power plant Miéville 1,472 m below. The reservoir has a capacity of 40 million m³ of water, the power plant a performance of 70 MW. The pressure pipe and therefore the tunnel have a gradient of up to 95%. The electric conductor inside of the rope ensures the transmission of control and communication signals from the winch control room to the cable car.

The previous rope that had been installed in 2000 and was recently removed, is a CASAR Turboplast permeated with 1+6 copper conductors. The customer was very satisfied with the achieved operating life of 13 years. The CASAR Turboplast had to be taken down finally because of wire breakage in the crossover zone on the drum. Even high-quality coiling systems cannot prevent a rope from being thrown to the side by half a rope diameter during each drum rotation. In these so-called crossover zones, the individual rope windings rub against each other, which may cause wire breakage. By changing from CASAR Turboplast to CASAR Duroplast, we are now trying to constructively influence the ropes' operating life by increasing abrasion resistance. The conversion from Turboplast to Duroplast means



a change from a 8x26 Warrington-Seale construction to a 8x17 Seale construction. Seale constructions feature especially thick wires in the outer strands and are therefore resistant to external damage/abrasion.
Regular maintenance and repair, specifically relubrication, decrease abrasion by reducing the abrasion coefficient. In addition, moving the rope on the drum can extend the operating life. The crossover zones are always quite short damaged zones followed by long undamaged zones, the so-called parallel zones. By cutting the rope by around 1/3 of the drum circumference before the discard state in the crossover zones is reached, we relocate the previous crossover zones to the uncritical parallel zones and undamaged rope zones to the crossover zone.

Duroplast was installed in the lower section which connects the power plant in Miéville (452 m above mean sea level) with the so-called window IV at 1569 m. It is one of the most steep and challenging sections as 1077 metres in height must be overcome. When empty, the hoist weighs 3 tons and can transport a payload of up to 10 tons or 21 persons. The rope winch is located in a tunnel built obliquely to the actual rail line. The rope is moved down from the drum over a deflecting pully onto the rail level. From the deflecting pully, the rope moves slightly upwards over rollers and then over the peak of the line, after which it goes steeply downhill. Rollers arranged in equal distances from each other along the route lead the rope and prevent contact with the ground and slack rope.

A special connection at the end finally links the rope with the hoist. The complete know-how of CASAR was required here as well as the conductor had to be guided hrough the grouted connection in order to transmit the control and communication signals from the winch control room to the cable car.

Investment for the future

Interview with Marc Altena, General Manager of the WireCo Crane Center

Purchasing the Endenburg BV in Gouda/NL operating facility in April of this year has laid the foundation for the start of the WireCo Crane Center (WCC). This investment is an important step towards improved market supply as this creates a more comprehensive provision of ropes and the option to customise ropes. We spoke with Marc Altena, the Managing Director of the WCC, on the current situation and plans for the future.

WOR: Marc, would you tell us something about your professional background?

MA: I have worked in the rope industry for many years, previously as the Managing Director of Ymuiden Stores Holland BV, which ships nets, ropes and other fishing equipment to many countries and belongs to the WireCo Group since 2012. When they contacted me with the idea to manage the construction of the WCC, I didn't hesitate for long to accept this challenge.

WOR: What is the current state of the WCC construction?

MA: The construction of the warehouse is well-advanced; by the end of the year, we will have achieved a total stock of around 1,000 tons of rope. Half of them are CASAR and OLIVEIRA products. In combination with the modern processing unit we are able to respond quickly to the demand of our customers. In the current construction phase, it still focuses on the Benelux area in which we supply both traders and OEM.

WOR: What are your plans for the future?

MA: Plans call for the expansion of capacity to 1,600 tons of rope. We aim to supply other regions and countries with this volume and further improve our services. Together with the products in the factory warehouse, WireCo would then provide excellent availability.

Large order of CASAR ropes by Deck Crane Manufacturer

Coops & Nieborg BV, a leading Dutch manufacturer of ship equipment placed an order for 18 sets of high-performance wire ropes to the WireCo Crane Center. The delivery will contain 42mm Powerplast as hoist rope and 36mm Turboplast as luffing rope. This well-established rope combination will deliver the needed top performance for the deck cranes Coops & Nieborg is going to produce. Cutting, assembly and shipment will be done by the WireCo Crane Center in Gouda, Netherlands.

Welcome Michael Winkler

On September 1st, 2014, Mr. Michael Winkler began working as 'Shipping Departmental Manager' at CASAR. With his professional and dedicated team of specialists, he is fully responsible for all CASAR ropes despatched out of Kirkel. To enable him to make this possible, he has 38 successful years' experience in many varied managerial roles within the International Shipping field. We are extremely privileged to have Mr. Winkler on board, and wish him all the best in his new role at CASAR.

NEXT ISSUE WILL BE PUBLISHED IN

JANUARY 2015

PLANNED TOPICS:

- LARGE DECK CRANE ON AEOLUS WITH HIGH-PERFORMANCE CASAR ROPES
- NEW CALCULATION METHODS TO IMPROVE ROPE LIFE
- BAUMA CHINA 2014 STORY

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