

world of rope

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CASAR ROPES FOR THE LARGEST
TOWER CRANE IN THE WORLD

Dear Newsletter Readers,

It's a pleasure to welcome you to the first newsletter in 2019. This year, the Bauma is happening again, which is the largest international trade fair in Construction industry. Of course, we will also be represented at the trade fair again. We would appreciate you visiting our booth in Hall C 4, Booth 115. Let yourself be surprised by our new inspiration.

As in the past, BAUMA surely will provide some positive stimulus and certainly will provide good discussions and a technical exchange. Please feel free to contact our rope specialists on site for a detailed conversation.

Yours sincerely,

Andreas Schmeiss

SVP Global Cranes

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BAUMA 2019

CASAR ropes for the largest tower crane in the world

New year, new happiness. In the beginning of 2019, this widespread talk was also true for our colleagues from CASAR Australia. This is how you succeed, by landing a very exciting order for the largest tower crane in the world. It involves the new roping of a 330 t Favelle Favco tower crane with luffing jib of the Australian Marr Contracting PTY LTD. This crane will be used for 14 months starting in July, in order to construct the Canakkale 1915 suspension bridge over the Dardanelles, a strait in the Mediterranean between the Aegean and the Sea of Marmara. This suspension bridge has a width of 36 m and carries a 6-lane motorway. It is an important component of the US \$2.8 billion difficult Kinali-Balikesir motorway project. The total length of the bridge is 5169 m, with the distance between the two main pillars being 2023 m. Measured at the span length it thus supersedes the Akashi-Kaikyo bridge in Japan and wins the title of "longest suspension bridge in the world". The completion date is set for 2023, which is the year of the one-hundredth anniversary of the establishment of modern Turkey.

Marr, an Australian specialist for heavy-duty equipment, deliberately decided to use the 330 t Favelle Favco M2480D, since this has already proven its extraordinary capabilities in the past. The success story of this crane began almost exactly 10 years ago in the construction of a waste-to-energy plant in Qatar. Here, the M2480D attracted such a

great deal of attention because it is able to operate on the narrowest space and can also place large elements exactly to the millimetre. If the crane is built on its support beams, it only occupies a ground area of approx. 4 square metres or, alternatively, the area of two side-by-side parked cars. In addition, the crane is immensely fast. Thus, loads of up to 110 t in two-strand operation are carried out, whereby comparable crawler cranes work with up to 10 strands and need up to 10 times the space. The 55 t winch can coil up to 95.5 m/min and complete the high-speed power package.

Of course, all this also puts the highest requirements on our CASAR ropes that are used. In order to be able to run such large loads in two-strand operation, the ropes have to achieve high breaking strength.

A Ø54 mm CASAR Eurolift with a tensile strength of 2160 N/mm² is therefore used as a hoist rope. CASAR Eurolift has proven itself for many years in all types of hoisting applications and is always used when the highest rotational stability is required. In addition, the rope is characterised by its outstanding winding behaviour on multi-layered drums.

Our CASAR Parafit with a diameter 42 mm is used as a boom luffing rope. Through its high fill factor, resulting from the special hammer compression, it is predestined for this difficult application with high surface pressure.

The crane in Turkey is a modified version of the M2480D with an extra-large drum, to be able to accommodate 1220 m of the 54 mm Eurolift. The "Standard" M2480D operates with 600 m-long hoisting ropes. The crane's auxiliary winch is equipped with 36 mm CASAR Eurolift. A total of three hoisting ropes were ordered each at 1220 m, two of which are delivered directly to the construction site in Turkey; the third remains in Germany at CASAR as a replacement rope.

"World of Rope" will keep you updated as usual. This is surely not the last time we will report about this unusual project.

ABOUT THE FAVELLE FAVCO M2480D:

The Favelle Favco M2480D is the strongest tower crane in the world. It is the third crane from the series of heavy-duty tower cranes, which Marr has developed together with Favelle Favco.

The M2480D lifts 330 t up to a radius of 15 m and can still lift 100 t in a radius of 45 m. Here, the hook height is 130 m, and the crane can operate without a retaining anchor.

In contrast to conventional crawler or mobile cranes, the M2480D is allowed to work at wind speeds up to 20 m per second, which is more than double the permissible wind speed for these. This fact, together with the immense speed, contributes significantly to increasing productivity.

- **Lift capacity:**
330 tonnes
- **Maximum radius:**
130 metres
- **Lift radius ratio:**
100 tonnes at 45 meters
- **Capacity at 100 m radius:**
25 tonnes
- **Main winch hoist capacity:**
55 tonnes
- **Auxiliary winch hoist capacity:**
25 tonnes
- **Maximum allowable wind speed:**
20 metres per second

The photo shows an M2480D at work in Barangaroo, New South Wales. In addition to the so-called "International Towers Sydney" (ITS), the "Crown Casino" emerges, the first 6-star luxury hotel in NSW. The ITS involves 3 skyscrapers, which were built between 2013 and 2016, and usually described as Tower 1 (217 m height, 49 floors), Tower 2 (178 m, 43 floors) and Tower 3 (168 m, 39 floors). The new hotel will still surpass the ITS and, with a height of 271 m and 75 floors, it will dominate the Sydney skyline for years. Completion is planned for 2021. Here, our CASAR ropes contribute to the successful outcome.





from left to right: Andreas Schmeiss, SVP Cranes and Managing Director Casar, Markus Stieren, Casar plant manager, Karsten Minnig, project manager

Investment in the future

WireCo is currently expanding its storage capacity at the CASAR location in Kirkel. World of Rope spoke with managers about this interesting project:

WOR: At the moment, the CASAR plant premises are currently being vigorously built, what is happening there?

Markus Stieren: We are investing in our customer service. By closing the WireCo Crane Centre, an additional central storage location in Europe was required for our CASAR and OLIVEIRA ropes. The selection was made for the CASAR premises; there is already a rope-oriented infrastructure here. This saves us time and we can rely on an

experienced team for rope assembly and shipping.

WOR: Short routes and response times were also the strength of the WireCo Crane Centre. What are the reasons for relocation to Germany?

Andreas Schmeiss: The idea of a special distribution branch for crane ropes from CASAR and OLIVEIRA was the right step towards greater customer proximity. However, we were overtaken by our own success, and the WireCo Crane Centre in Gouda could not be enlarged accordingly. The search for an alternative location in the Netherlands was not successful either. The factory expansion at CASAR was ultimately

the logical step for us.

WOR: What is further planned for the new warehouse centre?

Karsten Minnig: The new warehouse will be completed in spring; for the equipment and additional infrastructure work, more time is still required. Heavy loads must be safely moved and stored both in the warehouse and on the connection routes to the plant; this requires great care in the planning and execution of the work. In the middle of the year, the warehouse should be ready for operation. Through the available higher capacities in the warehouse and assembly, we can respond faster to the needs of our customers.



EXPERIENCE OUR ROPES
IN VIRTUAL REALITY

Welcome to Bauma 2019

One notices how quickly three years have passed when Bauma in Munich is happening again. Visitors again expect a superlative construction machine trade fair and CASAR, with its inviting two-story trade fair stand, expects the rope-using specialist audience in Hall C4, Booth 115. In addition to presenting innovations and product optimisations, CASAR has a special highlight this year. Virtual reality has found its way into the world of CASAR, and our booth guests can actively immerse themselves in the world of CASAR special wire ropes.

Bauma Munich is also expanding more towards mining equipment. For this reason, CASAR presents some specialities from the extremely successful programme for mining components at our trade fair booth. The CASAR mining specialists will also be available here with resources and advice.

bauma
APRIL 8–14, 2019, MUNICH
Visit us: C4.115

NEXT ISSUE WILL BE PUBLISHED IN

JUNE 2019

PLANNED TOPICS:

- BAUMA 2019: REPORT
- CASAR IMPROVEMENTS
- SUCCES FOR DOUBLEFIT

RESPONSIBLE:

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Award as "Future Champion"

Champions or in other words world market leaders offer outstanding products and services and are characterized by innovation and the highest quality on a global level. Companies that have the potential to become such world market leaders are the so-called "Future Champions".

An up-to-date list of "Future Champions",

including CASAR Drahtseilwerk Saar GmbH, was published in the print edition 06/2019 of the trade magazine WirtschaftsWoche under the title "Einsame Spitze". This award makes us proud of what has been achieved so far and is, of course, also an incentive for us to continue optimizing our products and processes in the future in a customer-oriented manner.



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A WireCo[®] WorldGroup Brand