

world of rope

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THE FLOATING CRANE "ZACHARY" CELEBRATES ITS SUCCESSFUL COMEBACK



New Singapore national stadium – Singapore Sports Hub, Kallang

The new national stadium of Singapore was opened at the end of June 2014. In 2015, it will be the venue of the 28th South-East Asian Games. It features 55,000 seats and replaces the old national stadium, which was demolished in 2010. It is a visionary dome construction, coated with ultra-light ETFE material. The national stadium is part of the Singapore Sports Hub, a gigantic, 35-hectare large sports, leisure and entertainment centre. It is currently being built on the banks of the Kallang bay, which is a first-rate harbour area of Singapore. The futuristic national stadium forms the centre

of the new Sports Hub, setting new standards in all areas of modern architecture. The spectator stands, for example, are mobile, and an energy-efficient air-conditioning concept supplies each of the 55,000 seats with fresh air. At the same time, the required energy is only 15% of the energy required by a conventional fully air-conditioned stadium.

However, the centrepiece of the new national stadium is the complex, mobile roof construction. The roof dome can be opened or closed as required, is weather-resistant and efficiently provides shade for athletes and spectators

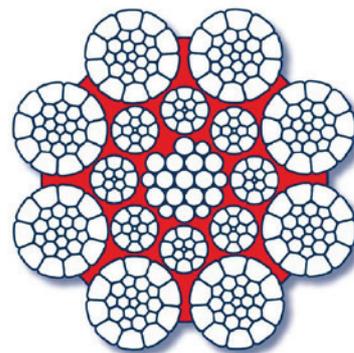


Blake Chandler
WireCo WorldGroup
Senior Vice President Sales

As many of you leave for your well-deserved holidays, I would like to thank you for your continued trust in our organization. As I hoped you have noticed, we've been pushing ourselves by taking major steps to improve our services. Guided by your feedback, these changes have allowed us to put our customers first, move faster, and ensure that we are getting things right the first time. Quick reaction, flexibility and reliability are today's success parameters, and at CASAR our dedicated employees are working hard to accomplish this task daily. As always, I invite you to contact me to learn more about our plans for the future and any steps we can take to help you improve your business.

Sincerely

yours 



Sectional view of CASAR Paraplast

alike. With a span of 315m, it is the largest roof dome of a sports arena in the world. The two mobile roof segments with a total surface area of 20,000m² are moved by special wire ropes produced by the CASAR Company. The sophisticated application, combined with the extreme climatic conditions typical for regions near the equator, is also a complex task for us as a rope manufacturer. In addition, a life-span of 60 years with ease of maintenance was required. All these requirements ultimately led to a modified CASAR Paraplast rope

construction. Thanks to its double-parallel make, CASAR Paraplast offers high flexibility, and the core sheathed in plastic ensures both a long lifespan and the necessary running smoothness. The compacted outer strands ensure high breaking resistance and good sitting conditions of the rope on the drum. In addition, a special surface coating of the wires in combination with a special lubricant provides effective corrosion protection and ease of maintenance.

A total of 16 CASAR Paraplast ropes with a diameter of 50mm and a total length of 1020m move the roof and can open and close it in only 20 minutes. The ropes are attached to the roof construction with Open spelter sockets. Following a comprehensive lifespan calculation by Günter Knerr, Head of our Technical Service for Europe, the required life-span of 60 years was verified and confirmed.

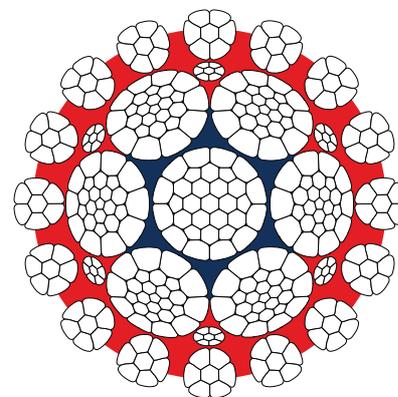
CASAR Doublefit – Novel rope design for the most challenging applications

Even though the rope market offers many different rotation-resistant products for crane applications, there is always room for improvement. Particularly for heavy-load applications, which unite the requirements for highest breaking strengths, best spooling behaviour for multilayer spooling and highest rotational stability, the perfect product still seems to be missing. Although good rope constructions already existed on the market, there has been none that combined all these different characteristics.

The CASAR rope specialists in Germany have taken on this challenge and developed a rope, which comes very close to fulfilling this goal. Two of these requirements could already be met by compacting the strands and swaging the core rope as well as the closed rope. The very round and smooth surface provides the required spooling behaviour

for multilayer spooling, and the high filling factor guarantees high breaking strength. These high breaking strengths are achieved with standard nominal wire strengths according to the applicable standard. The plastic sheathing surrounding the steel inlay securely keeps the lubricant inside while preventing penetration of dirt and humidity.

The new design is of particular importance for the improved spooling behaviour for multilayer spooling. The smooth rope surface not only prevents the occurrence of interlockings, which could damage the outer strands but also negative impressions on the rollers and drums. Compared to ropes with a lower minimum breaking strength, the stronger doublefit allows for a smaller dimensioning of sheaves and drums, significantly increasing the payload of the crane.



Cross-sectional image of CASAR Doublefit