



SOLITE[®]

The high strength fiber rope for challenging lifting applications

THE BEST OF BOTH WORLDS

In a joint effort spanning several years, TEUFELBERGER, the specialist for steel wire and fiber ropes, and Liebherr, one of the world's leading crane manufacturers, developed soLITE®, a unique, innovative, and patented high strength fiber rope for challenging lifting applications, especially for use on tower, mobile, and crawler cranes.

The best of the two worlds of steel wire and fiber ropes was combined and, by drawing on in-depth user know-how, brought to perfection. soLITE® readily and successfully accommodates the increasing demand for larger lifting heights and higher load capacities.

soLITE® excels in field testing

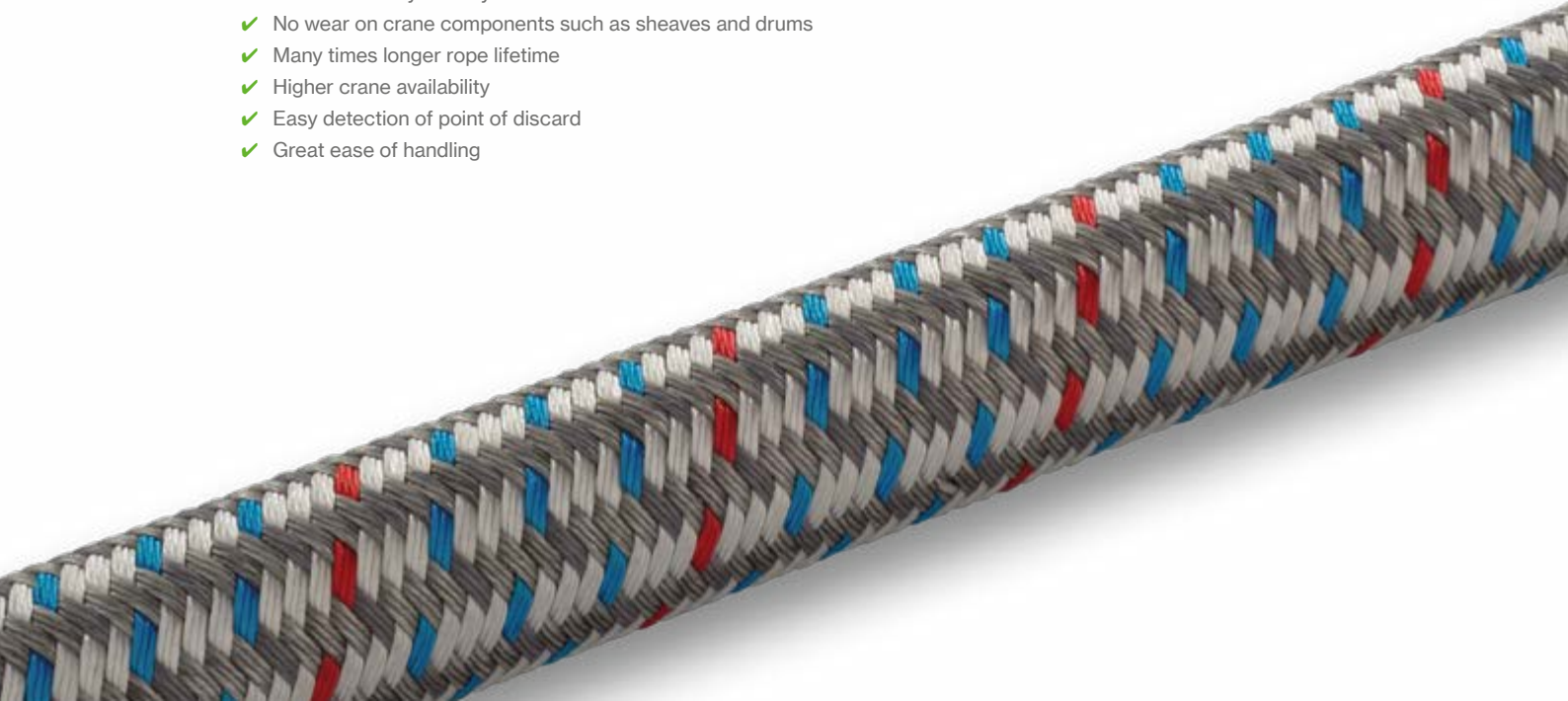
Not until a rope is put to direct practical use will its quality really reveal itself. Therefore, TEUFELBERGER has left nothing to chance and, in a joint effort with Liebherr, has not only conducted intensive testing on test rigs, but also used soLITE® very successfully in the field since 2016. Since the start of this project, 85,000 m of test rope of various diameters have been produced, and 87,000 hours of development work have been put in.

In tests conducted on about 20 cranes – tower, mobile, and crawler cranes – the rope's low weight helped achieve particularly great advantages: in many cases, it is possible to fit soLITE® on the crane by hand without auxiliary reeving winches. In addition, re-reeving the hook block becomes easier and can be done faster. Thanks to the synthetic fibers, the rope does not need to be lubricated.

Comparison to steel wire rope leaves no doubt

High performance steel wire ropes are undoubtedly a good solution for many use scenarios. However, soLITE® offers you unbeatable advantages for many challenging lifting applications such as on tower, mobile, or crawler cranes.

- ✓ 80 % lower rope weight. Hence, lighter hook block and thus 10 % greater loading capacity than with steel wire rope
- ✓ Environmentally friendly – no lubricants
- ✓ No wear on crane components such as sheaves and drums
- ✓ Many times longer rope lifetime
- ✓ Higher crane availability
- ✓ Easy detection of point of discard
- ✓ Great ease of handling



Patented soLITE® construction makes the difference



TEUFELBERGER is the only steel wire and fiber rope specialist to have developed and implemented a fiber rope that features a unique, innovative, and patented fiber-rope-based steel wire rope construction.

We designed our high performing steel wire rope construction by using the best, extremely lightweight, high strength synthetic fiber. The impressive result is a combination of the advantages of a high performance steel wire rope with those of a high strength fiber rope.

Reliable determination of point of discard

While the point of discard for steel wire ropes can be determined reliably based on the number of broken wires, damage symptoms, or corrosion, this has so far not been possible for fiber ropes. For the intelligent soLITE® fiber rope, the point of discard can be determined redundantly.

Defined wear of cover

The protective cover consists of fibers of various colors which, due to their consistency, wear differently. As soon as the red core becomes visible, soLITE® must be discarded.



In effect since 2017, the FEM 5.024 standard defines guidelines, particularly regarding the point of discard for the safe use of high performance fiber ropes on cranes. At the time when the point of discard has been reached, soLITE®, thanks to its construction, still has 100 % of its breaking load. This makes soLITE® even safer than a steel wire rope.

Bending cycle counter

In combination with the bending cycle counter on the crane or the machine, soLITE® can be used on almost any reeving system.



Machine based
condition monitoring



⚠ WARNING

Using these products may involve hazards. Therefore, use our products only for the purposes they are designed for. Customers must ensure that all users are familiar with their correct use and the necessary safety precautions. Please keep in mind that any of the products may cause damage or harm when misused or overloaded.

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