

TOWER CRANES NORTH AMERICA CONFERENCE & RECEPTION

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M.D. Liebherr Tower Cranes

The benefits of fibre ropes on tower cranes

CREATED AND ORGANIZED BY

INTERNATIONAL
CRANES
AND SPECIALIZED TRANSPORT

AMERICAN CRANES & TRANSPORT
ACT

khl

PARTNER ASSOCIATION

SC&RA Specialized
Carriers
& Rigging
Association

Liebherr Tower Cranes

We make lifting better.



A history of ropes



Hemp ropes



Steel ropes



Fibre ropes

Research & Development

test in sand,
dust ,n' rain

LIEBHERR 2011
&  **Teufelberger**

~ **70.000 m**

2009

~ **55.400 h**

$\Delta \sim 90^{\circ} \text{C}$

$\Delta \sim 153^{\circ} \text{F}$

tech labs &
systems, clima
chambers, ...



100s of
documents

Research & Development



Special constructions

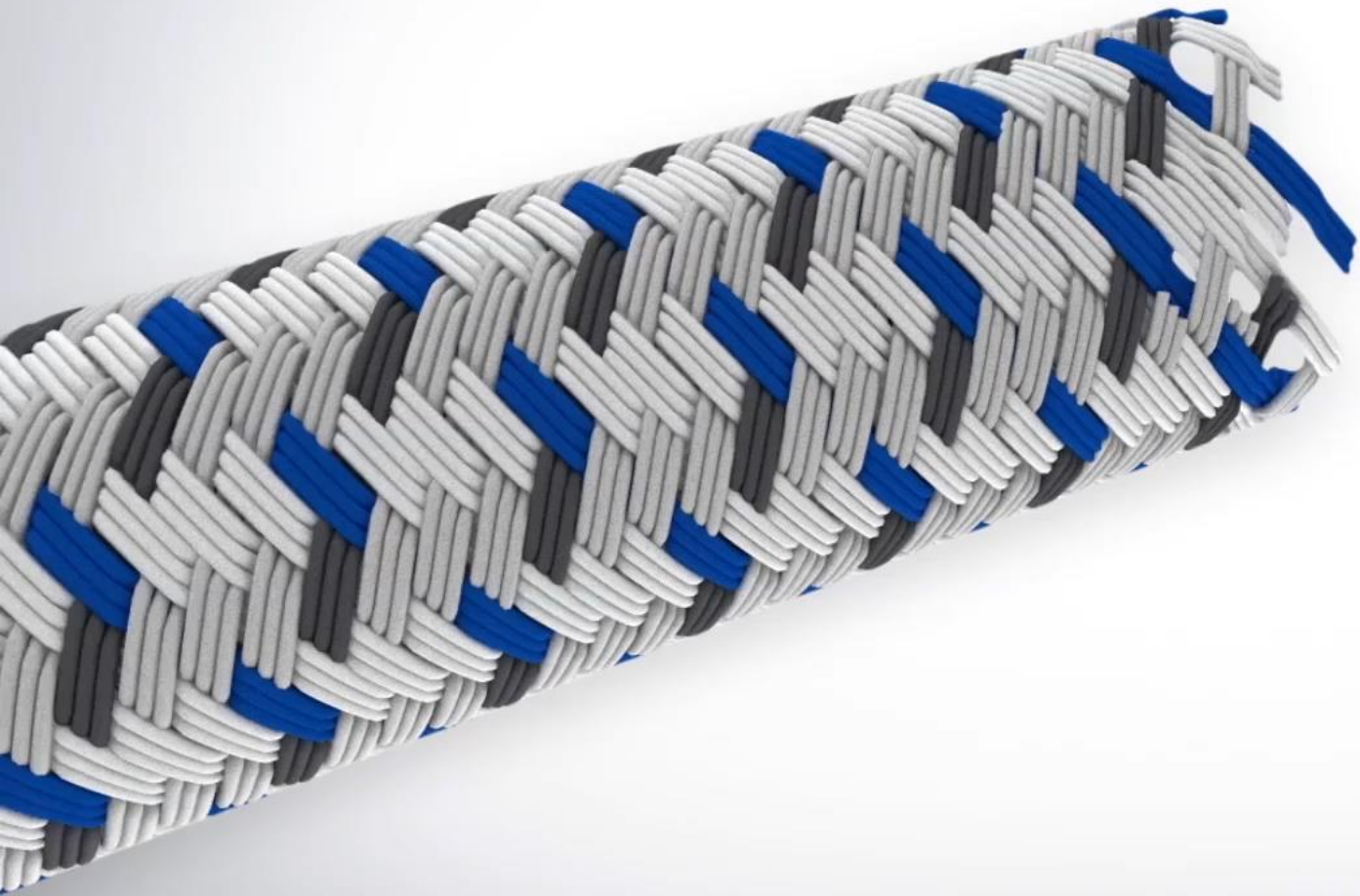


Up and down for years



Until...

The result



The result



lacing rope with syntetic fibre - **soLITE**

- same roll behaviour
- equal diameter

- + **more durable on site**
- + **corrosion-free**
- + **better handling**
- + ...

- **80%**

The benefits for tower cranes



Product Testing

10 tower cranes

5 countries

318 weeks on sites

The benefits for tower cranes

+
safety

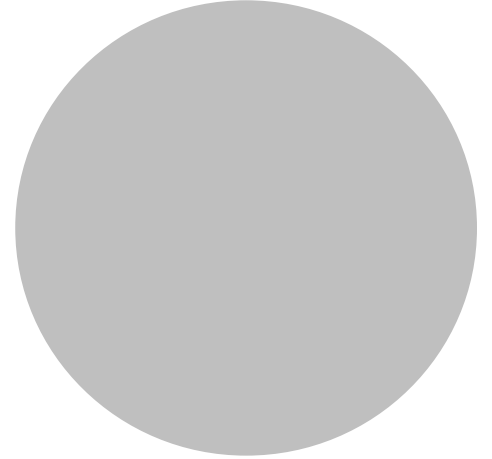
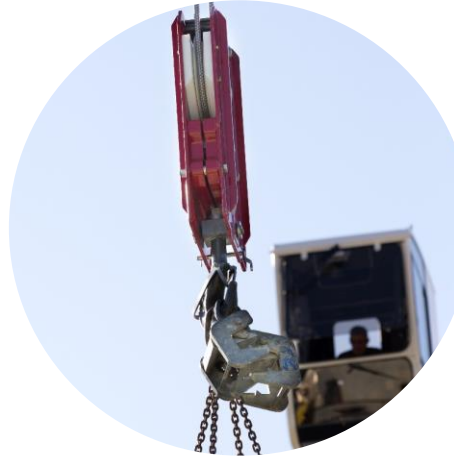
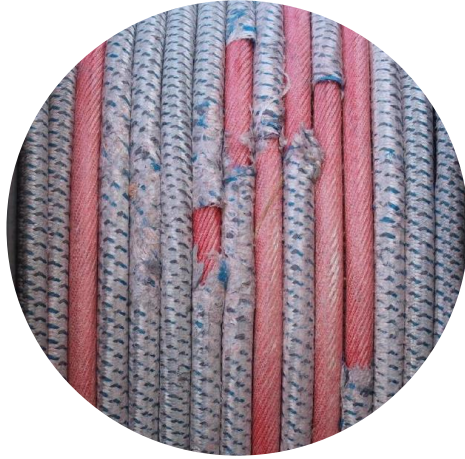
+
handling

+
life-time

+
intelligence

+
load-
performance

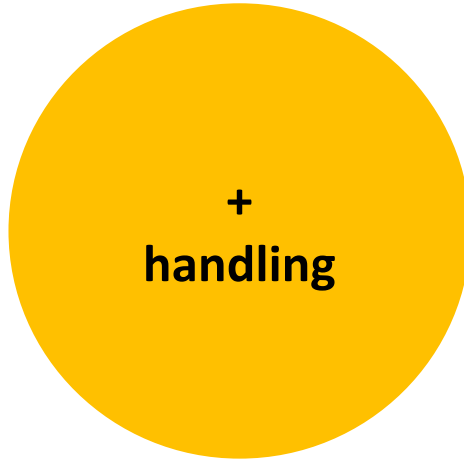
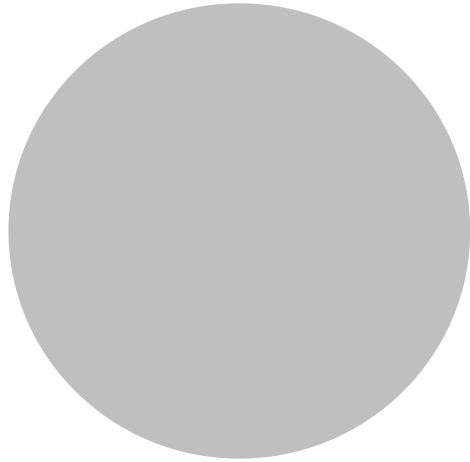
The benefits for tower cranes



Operators check is easy – just look for **red**.

Plain safety!

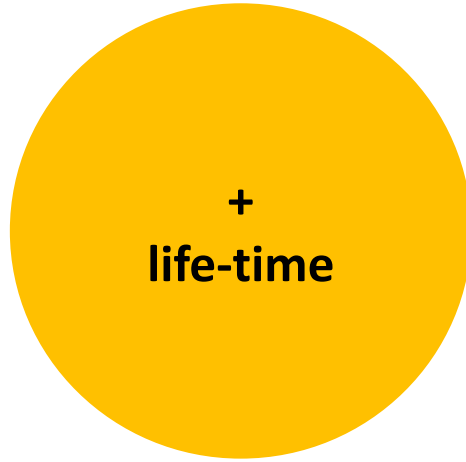
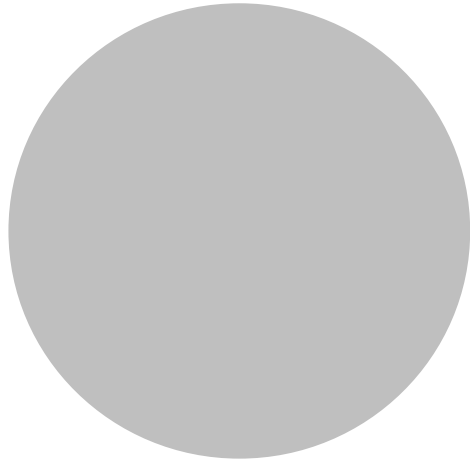
The benefits for tower cranes



Not just a phrase:

Faster, easier and cleaner assembly.

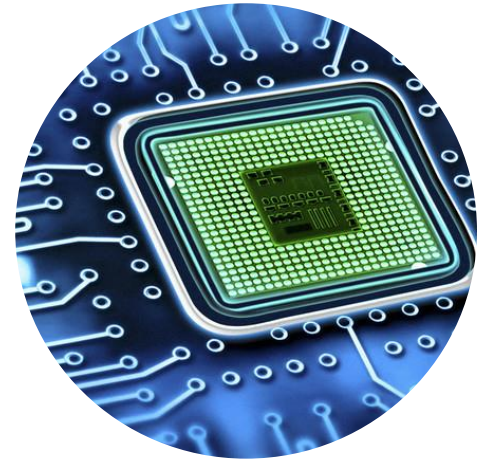
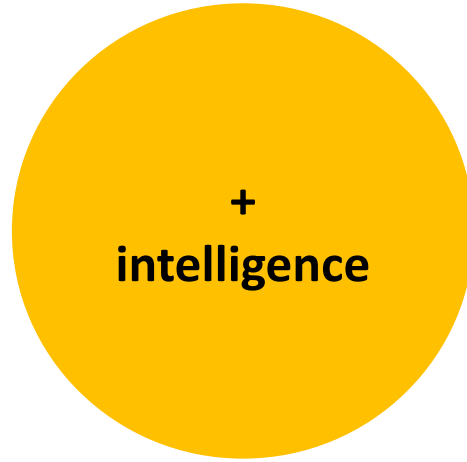
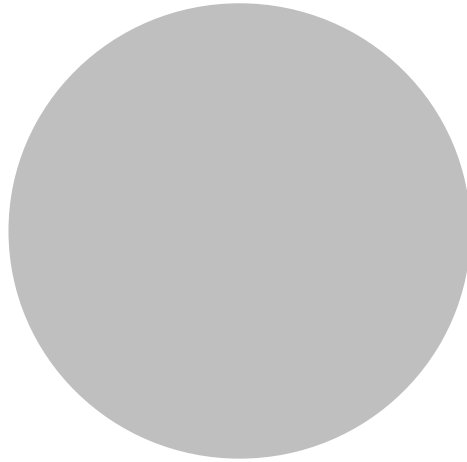
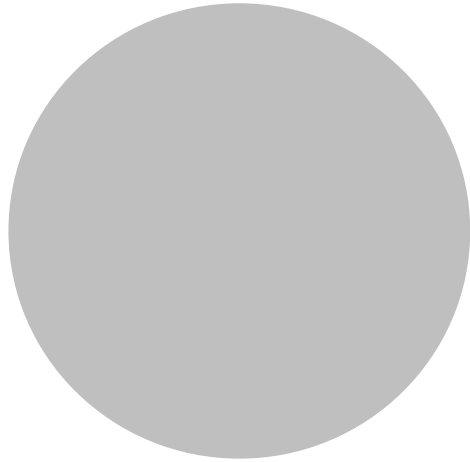
The benefits for tower cranes



Lasts longer and longer and longer...

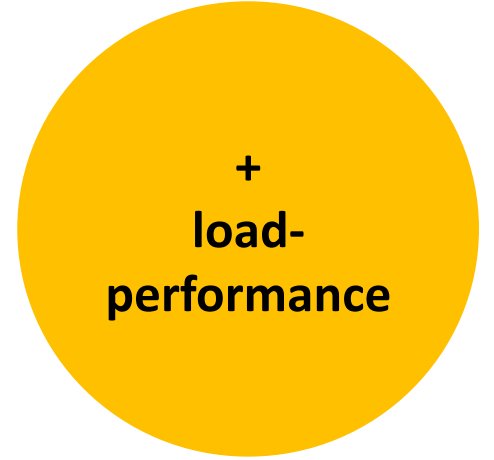
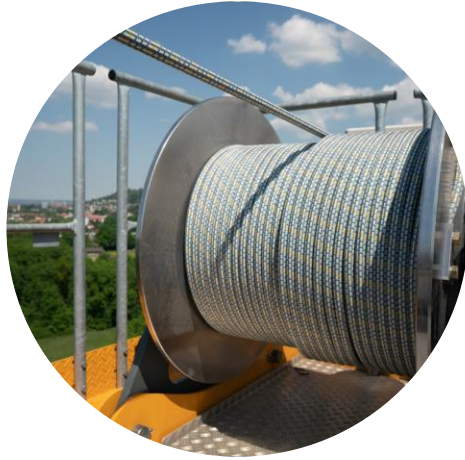
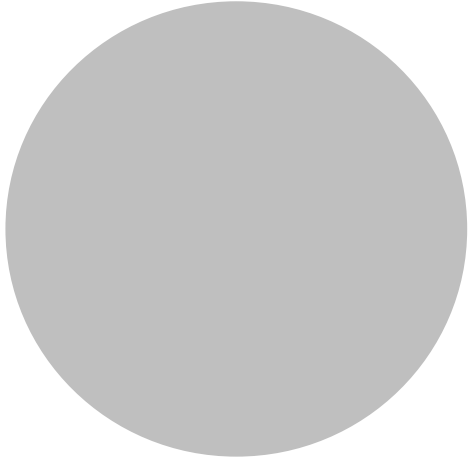
~ 4 times – 7 to 9 years on site

The benefits for tower cranes



Litronic Bending Algorithm
Intelligent condition monitoring

The benefits for tower cranes



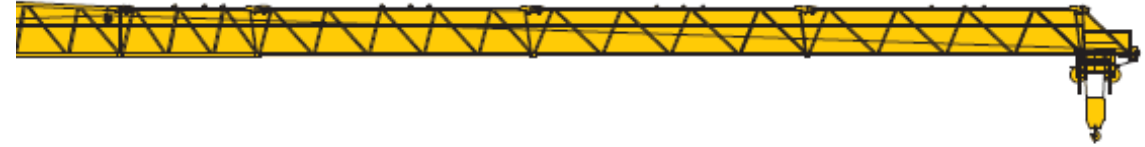
The big ,why'!

More load-performance

The benefits for tower cranes



250 EC-B 12



~~500 kg~~

-250 kg

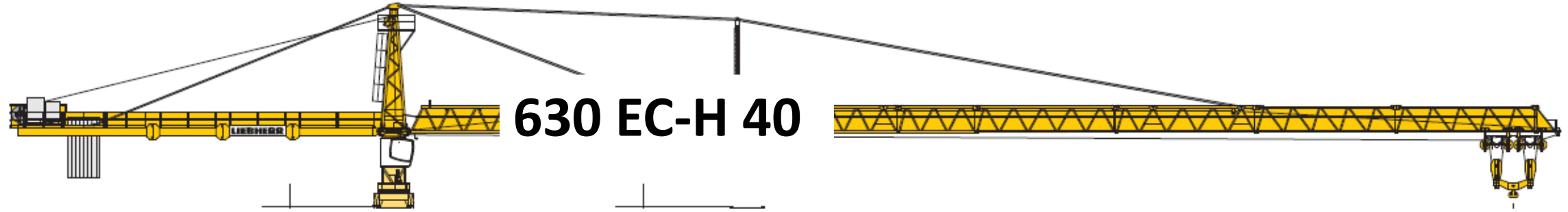


~~200 kg~~

-160 kg

+ 400 kg
~ 18%

The benefits for tower cranes



~~1050 kg~~

-950 kg

~~600 kg~~

-500 kg

+ 1450 kg
~ 36%

The benefits for tower cranes

+
safety

+
handling

+
life-time

+
intelligence

+
load-
performance

Start-of-sales: Bauma 2019



The benefits of **soLITE** for **tower cranes**