



STRONGER  
THAN  
STEEL



**STS**  
STRONGER THAN STEEL

# HIGHER BREAKING STRENGTH

# LOWER CONSTRUCTIONAL ELONGATION

# LONGER SERVICE LIFE

## THE STS TECHNOLOGY

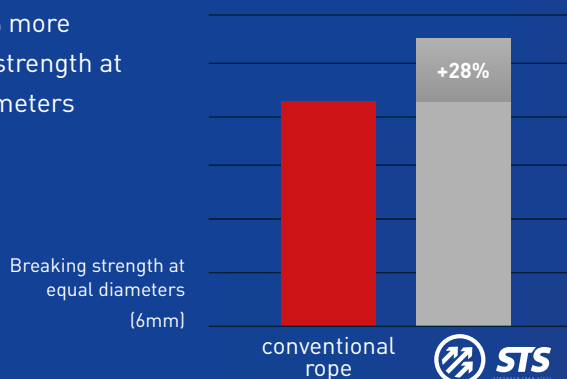
The rope made of HMPE (high modulus polyethylene) fibers is heat-treated, under tension, at temperatures greater than 100°C / 212°F.

At a microscopic level, this process causes the molecular chains to be oriented such that they are linear, thus ensuring greater load bearing capacity.

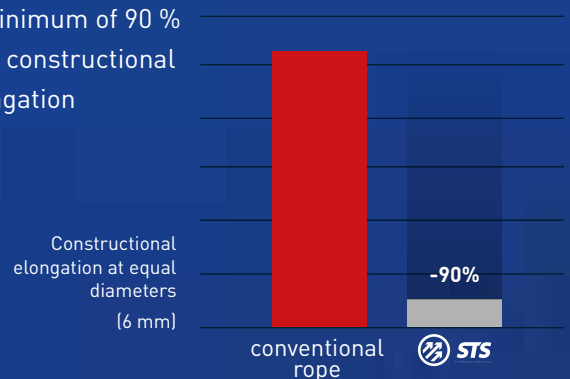
The STS process under exposure to heat increases the rope's breaking strength by achieving a uniform distribution of the HMPE fiber lengths throughout the rope's longitudinal profile.

## WHAT YOU GAIN

Up to 28% more breaking strength at equal diameters



A minimum of 90% less constructional elongation



## ADVANTAGES OF A ROPE WITH STS TECHNOLOGY

- Higher breaking strength at same diameter
- Same breaking strength at smaller diameter and less weight
- Low constructional elongation
- Longer service life due to closed rope structure, even without cover
- Stable rope cross-section

## ADVANTAGES OF THE STS TECHNOLOGY

TEUFELBERGER STS ropes are constructed using a precisely controlled process which utilizes the ideal balance of temperature and tensioning thanks to:

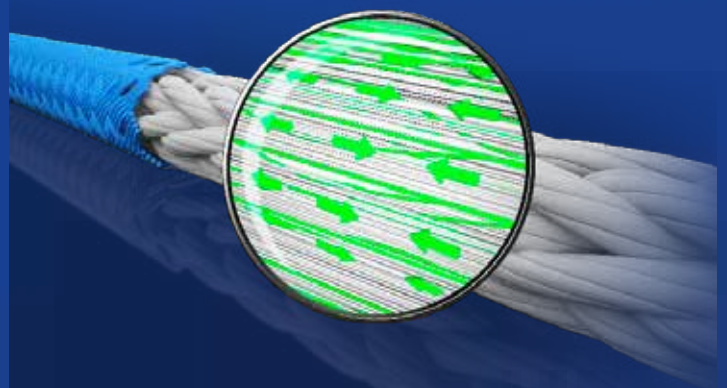
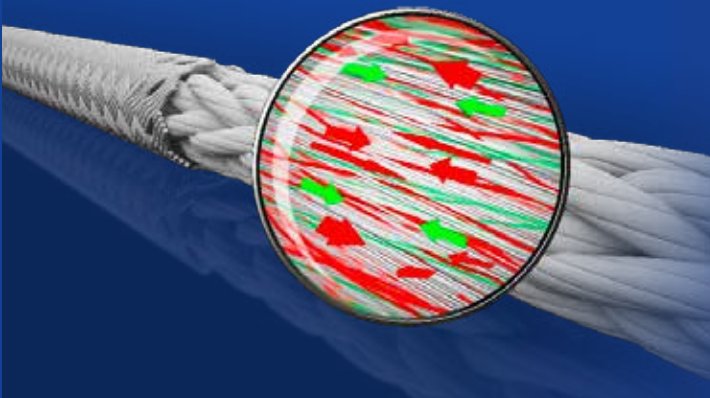
- uniform tension
- uniform heating
- minimized rotation of the rope during the process

## THE CONVENTIONAL ROPE

- Nonuniform fiber lengths in the rope's longitudinal profile
- Molecular chains are not fully oriented in the direction of the force
- Poor degree of utilization of the fibers contained in the rope

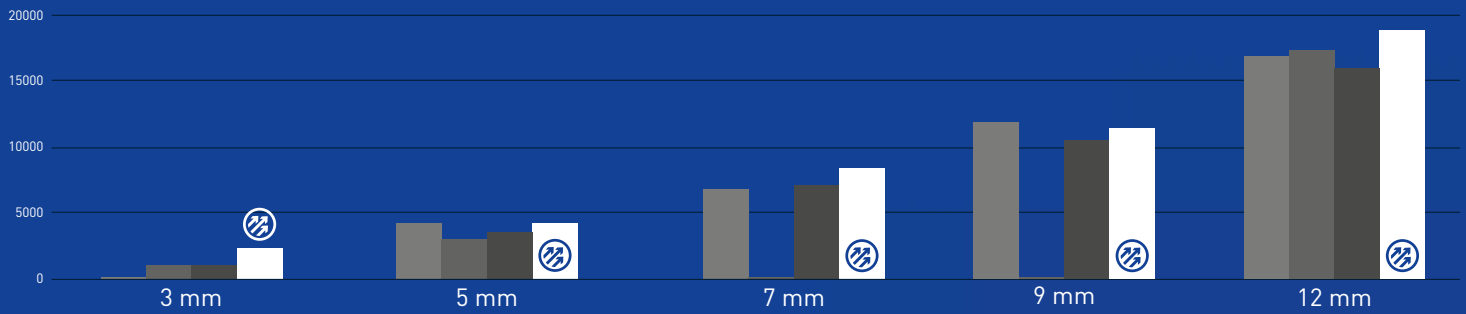
## THE STS STRONGER THAN STEEL ROPE

- Uniform fiber lengths in the rope's longitudinal profile
- Molecular chains are oriented in the direction of the force
- Improved degree of utilization of the fibers contained in the rope
- Higher breaking strength
- Stable rope cross-section
- Closed rope structure



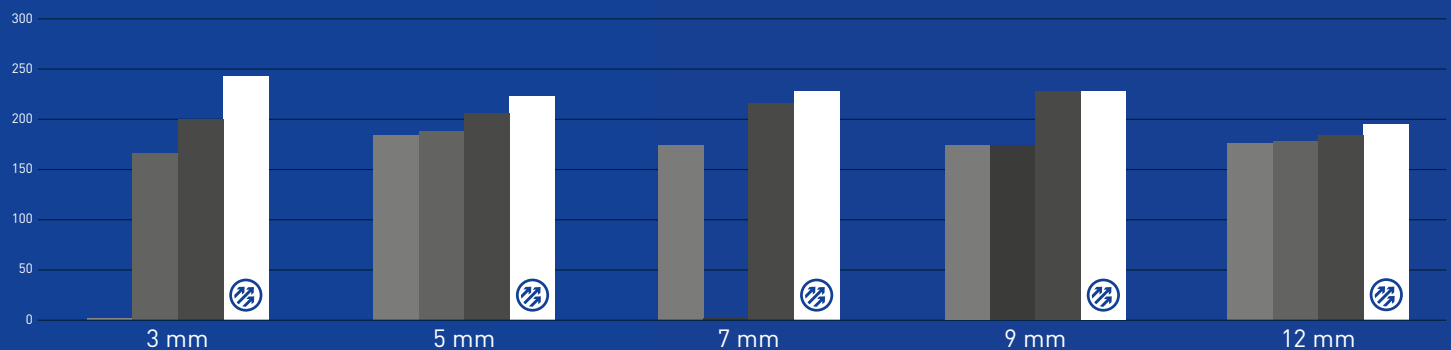
# BREAKING STRENGTH

[daN] Spliced average value



# BREAKING STRENGTH TO ROPE WEIGHT

[daN / g/m] Spliced average value



## Value for the customer:

- Higher breaking strength at equal diameter
- Smaller diameter and less rope weight at equal breaking strength

# DEVELOPED IN COOPERATION

STS Technology was developed by the TEUFELBERGER Corporation in conjunction with its subsidiary brands: TEUFELBERGER, New England Ropes and FSE Robline.

Our commitment to global collaboration ensures that our products will continue to be of the highest quality and will achieve the optimum levels of performance.

