The impact of temperature on mooring lines

Working with mooring lines requires the right equipment. It needs to be safe and reliable under every weather condition. In particular, mooring line solutions must be able to cope with the elevated temperatures that can arise on-deck, and in hotter geographical areas. Aramid-based mooring lines perform better than other synthetic mooring line solutions at higher temperatures.

Performance at 21°C (70°F)

When tested at room temperature, both aramid and HMPE mooring lines perform well.

Performance at elevated temperatures

But at higher temperatures, the strength of aramid mooring lines stays intact where HMPE shows reduction in strength.

It’s a myth the whole world is 21°C (70°F)

Many mooring lines are only tested in “perfect” laboratory conditions, assuming the whole world is 21°C (70°F) with an occasional drop of rain. And that’s a myth.

Dynamic heat development

When a rope is moving during an application, the temperature inside the rope increases. Basically one can say that the thicker the rope the hotter its core becomes.

Aramid

HMPE

Safe mooring solution

Recyclable

The benefits of Twaron® & Technora® in mooring lines:

- Low weight
- Reliable in every climate
- Safe mooring solution
- Recyclable

The myths unraveled

What exactly happens at the core of mooring lines when the temperature rises? Check out the video.

For more information:

Please email us at ropescables@teijinaramid.com or visit www.teijinaramid.com/applications/mooring-lines

Aramids by Teijin