

SEAL

Textile protection for maritime devices



SEAL — Exposé

SEAL: Textile protection for maritime devices

Cost-intensive maintenance is essential to preserve reliability of maritime devices. SEAL will reduce maintenance costs of offshore operations to almost 40%.

The natural raw material Basalt can be used as a drapier and elastic knit construction with tailor-made clothing in the maritime environment. SEAL Basalt knit protects maritime environment against contamination by synthetic or chemical materials and protects maritime devices by its antibacterial, antimicrobial and high-strength properties.





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SEAL — Textile protection for maritime devices / applications

Reduction of maintenance costs by extending the maintenance interval *really effective and sustainable*







SEAL — Effective extension of maintenance intervals

€ Cost of maintenance









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SEAL — On land preparation







SEAL — Executive summary

SEAL — Textile protection for maritime devices

Navigation marks or maritime architecture are subject to strong biological and physical influences.

In particular the growth of algae and in order to ensure the function and safety over long periods of use, the maritime devices are maintained with cost-intensive and lengthy maintenance and service intervals with elaborate personnel and machine times. To this, ships must be landed and reprocessed.

In 2016, Helmut Peterseim Strickwaren GmbH developed a textile-based solution in cooperation with the Saxonian Textile Research Institute and the Basalt Basin in Saxony and Thuringia, which can significantly extend the regular cleaning and processing cycles. By combining an innovative knit and a powerful yarn, the cost of maintenance can be reduced to almost 40%. This means enormous cost savings and an increase in the user spectrum for operators and manufacturers of maritime buildings and signs.

For this purpose, a specially developed basalt thread is processed on conventional knitting machines to form a surface knitted fabric, which encloses the parts of the shipping signs lying under the water surface. The surface properties of the basalt prevent algae growth and extend the possible dwell time in the water.





SEAL — **Executive summary**

Basalt's properties offer a wide range of applications to protect the maritime technology and architecture against the influences of nature and elements. The natural raw material Basalt can be used in combination with a drapier and elastic knitted construction and tailor-made clothing in the maritime environment. Basalt protects the environment from contamination by synthetic materials and protects the maritime applications by its antibacterial, antimicrobial and high-strength properties.

Advantages of SEAL:

- Protects maritime devices
- ✓ Reduces the maintenance effort (-budget) of maritime companies
- Protects the maritime environment

Why Basalt?

- ✓ Delays vegetation
- ✓ Ecologically harmless

Why knit?

✓ Solid and flexible, moldable







SEAL — On land preparation









SEAL — Insertion









SEAL — Let's go swimming!







Effective extension of maintenance intervals

SEAL



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