

Hydraulic Engineering UK

# Safe Sea Rescue, Protected Nature: Secutex® HB 501 for the Prerow Replacement Harbour

Hydraulic Engineering

- **Project name**  
Prerow Replacement Harbour,  
Germany
- **Contractors**  
Colcrete Wasserbau GmbH & Co.  
KG, Ueckermünde, Germany  
Deutsch-Dänische Wasserbau  
GmbH, Arnis, Germany
- **Product**  
Secutex® HB 501





Fig. 1: Construction of the pier



Fig. 2: Naue Secutex® HB 501 sand mat

## Conflict resolved: ensuring rescue, protecting nature

The existing emergency harbour at Darßer Ort is indispensable for the DGzRS, but it is located in the core zone of the Vorpommersche Boddenlandschaft National Park.

To end the decades-long conflict between harbour operations and nature conservation, the infrastructure needed to be relocated and Prerow proved to be a strategically suitable location. The new island harbour with pier connection ensures long-term operational capability, relieves pressure on the sensitive natural environment, and creates tourism synergies - supported by the European Regional Development Fund (ERDF).

## The solution: island harbour Prerow & Naue Secutex® HB 501

The Secutex® HB 501 sand mat was used as a high-performance filter in the foundation of the breakwaters. It meets the BAW basic test for soil types A-C and ensures permanent separation and filtration between the subsoil and the stone fill. This creates a robust, economical, and logistically efficient foundation that combines safety, durability and environmental compatibility.

## Installation under real conditions - precise, deep, reliable

The installation was carried out at water depths exceeding 6m from a work vessel using a long-arm excavator and crossbeam. This method enabled precise positioning of the roll material within short weather windows and significantly reduced the effort required on the water. Despite the local current conditions, the sand mat showed high positional stability on the seabed; it was not necessary to gradually build up the top layer. Particularly advantageous for the construction process: it was possible to ram fender piles through the sand mat without any problems and without impairing the filter function. Likewise, the stone fill for the breakwater could be applied directly - the mechanical resistance of the mat reliably protects the filter layer during installation and operation.

## Secutex® HB sand mats - your advantage in hydraulic engineering

- **Fast, safe underwater installation:** Rolled material shortens the construction time window and decouples the installation of the sand mats from breakwater construction.
- **Reliable filtration & separation:** Prevents material displacement and washout; ensures stable load transfer under the influence of waves and currents.
- **High mechanical resistance:** Withstands stress from handling, fender piles and coarse rockfill.
- **Durable in maritime environments:** Suitable for saline, dynamic conditions - **sustainable performance** over the entire life cycle.
- **Cost-effective:** Optimised cross-sections, reduced maintenance costs and more efficient construction processes.

## Conclusion

With Secutex® HB 501, the Prerow replacement harbour has a safe, durable filter solution that strengthens rescue operations and protects nature. **Rescue operations secured. Nature protected. Infrastructure fit for the future.**