STEP Consolidated
Special Technical Engineering Projects



Case Study

Brake hold test

Site	Lisboa - Portugal	**Situation**
Activity area	Mooring Equipment	
Year	2026	Performance of Brake Holding Tests on the vessel's mooring winches in order to verify the brake holding capability under the specified test load and establish the corresponding brake limiter settings.

Challenge

Perform Brake Holding Tests on the vessel’s mooring winches and verify the correct operation of the braking system under controlled load conditions.

Each winch was required to be tested up to the specified test load, corresponding to 60% of the applicable reference load.

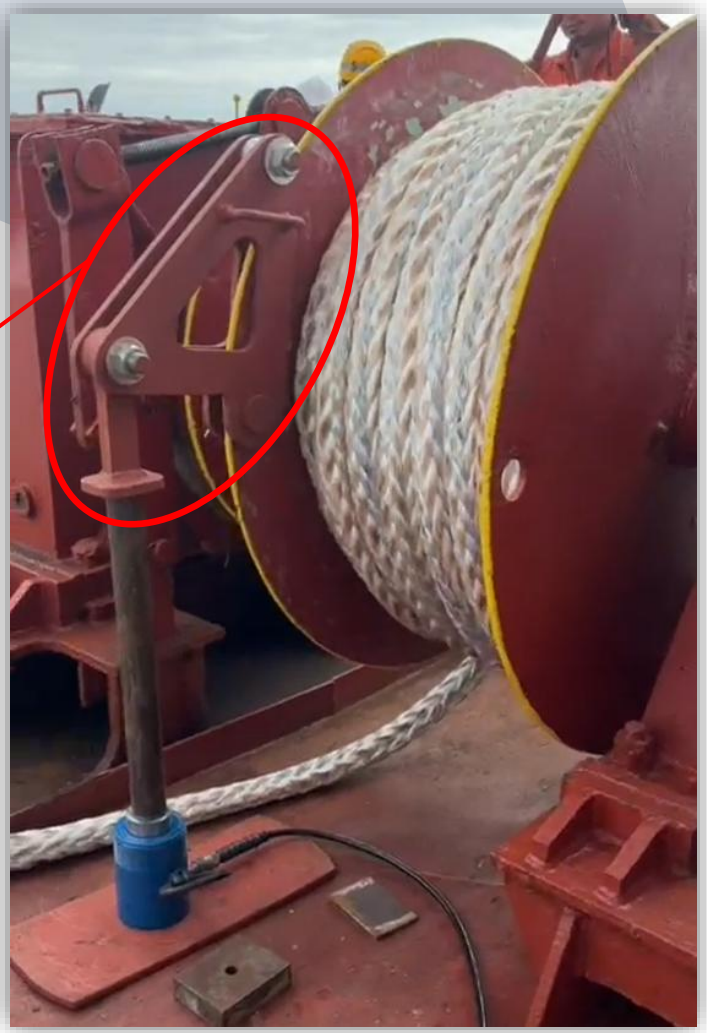
During the test, the behaviour of the brake system and the point at which the winch started to render were monitored.

After completion of the test, measurements of the brake limiters were taken and recorded in order to establish the corresponding brake settings.



General view of the brake hold test

Action



1. The Brake Holding Test tool was installed and correctly positioned on the mooring winch drum.

2. The required test load was calculated in advance, based on the vessel's technical information and winch characteristics, corresponding to **60% of the winch maximum load**.

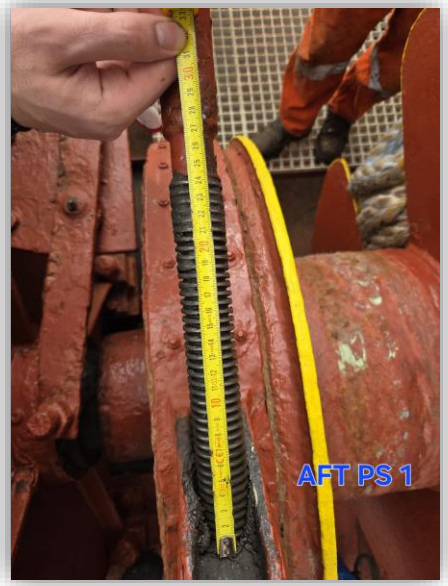
3. Pressure was progressively applied using a hydraulic pump and hydraulic jack until the winch started to move at the calculated test load.

4. Once movement occurred, the brake limiter position was measured.

5. The measured position was then used to establish and mark the **60% brake setting** on the limiter.

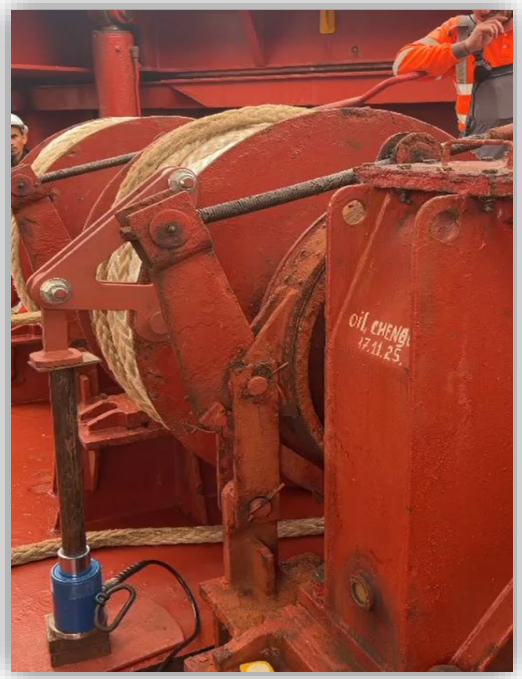


Brake Limiter Measurement



Pressure test





Results

The Brake Holding Tests were successfully completed at the specified test loads. The brake limiter settings were measured and marked, and the braking systems were verified to be functioning correctly.

"Very good job. Thank you."

Vessel Crew representative