

A first for French ports: HAROPA PORT installs “Shore Tension®” to offer optimum vessel service

The constant increase in the size of seagoing vessels imposes more stringent demands on port actors where mooring operations are concerned. In order to offer optimum service to its customers during their calls at Le Havre, HAROPA PORT has installed a ShoreTension® system – a solution enabling vessels to remain securely moored along the quayside.



- HAROPA PORT -
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ShoreTension®: a flexible, standalone solution

Ships regularly have difficulty in keeping securely alongside quay, a problem known as “surging”, which refers to back and forth movements by the ship along the terminal berth. Such movements are generally encountered when other vessels pass nearby.

In order to ensure the safety of boatage and mooring operations, HAROPA PORT, in consultation with boatmen, pilots, owners and stevedores in Le Havre, conducted **a study in 2019 involving installation of centimetric GPS units on around forty ships**. The objective: to measure and qualify such effects with a view to considering potential technical solutions.

Building on the results obtained, HAROPA PORT decided to equip the port with the
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□ Building on the results obtained, HAROPA PORT decided to equip the port with the **ShoreTension® solution** developed by KRVE, boatmen operating in the port of Rotterdam. This consists of special mooring ropes in Dyneema® (an ultraresistant polyethylene fibre) attached to hydraulic rams. This standalone system is additional to the ship's conventional mooring.

The ShoreTension® system is positioned on the quay between two bollards and can be used in different configurations:

- › on the bow and stern lines or the breast lines to counter ship movements away from the quayside in the presence of offshore winds;
- › on the spring lines to counter surging.

Using solar power, the system records **the data** remotely, most notably enabling terminal operators and ships' masters **to monitor the applied tension in real time**. The port actors concerned automatically receive a text message immediately the system registers an abnormal level of tension on a mooring line. The system also offers **greater flexibility** since it can be positioned on any quay, irrespective of level.

A test phase: Port 2000 and the Northern terminals

At the initiative of HAROPA PORT, in conjunction with Le Havre and Antifer boatmen, **a number of actors are involved** alongside Le Havre port **in testing at Port 2000 and the Northern terminals** (the Atlantique and Amériques quays) **this first for a French port:**

- › Le Havre – Fécamp Pilot Station
- › Shipping lines: ONE, CMA CGM, MSC, HAPAG LOYD, HMM, COSCO and OOCL
- › Stevedores: Compagnie Nouvelle de Manutentions Portuaires (CNMP), Générale de Manutention Portuaire (GMP), Terminaux de Normandie (TN)

Le Havre boatmen will attend training provided with the assistance of Brittany Ferries, which is allowing the system to be installed for the Bretagne. **52 “full scale” trials will be carried out in this way over the period of one year.** The ultimate objective: to extend the solution to other terminals. Operational implementation of this innovation will be carried out in 2023.
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□ solution to other terminals. Operational implementation of this innovation will be carried out on 29 September.

Total cost of the investment for HAROPA PORT (acquisition and installation): €770,000.