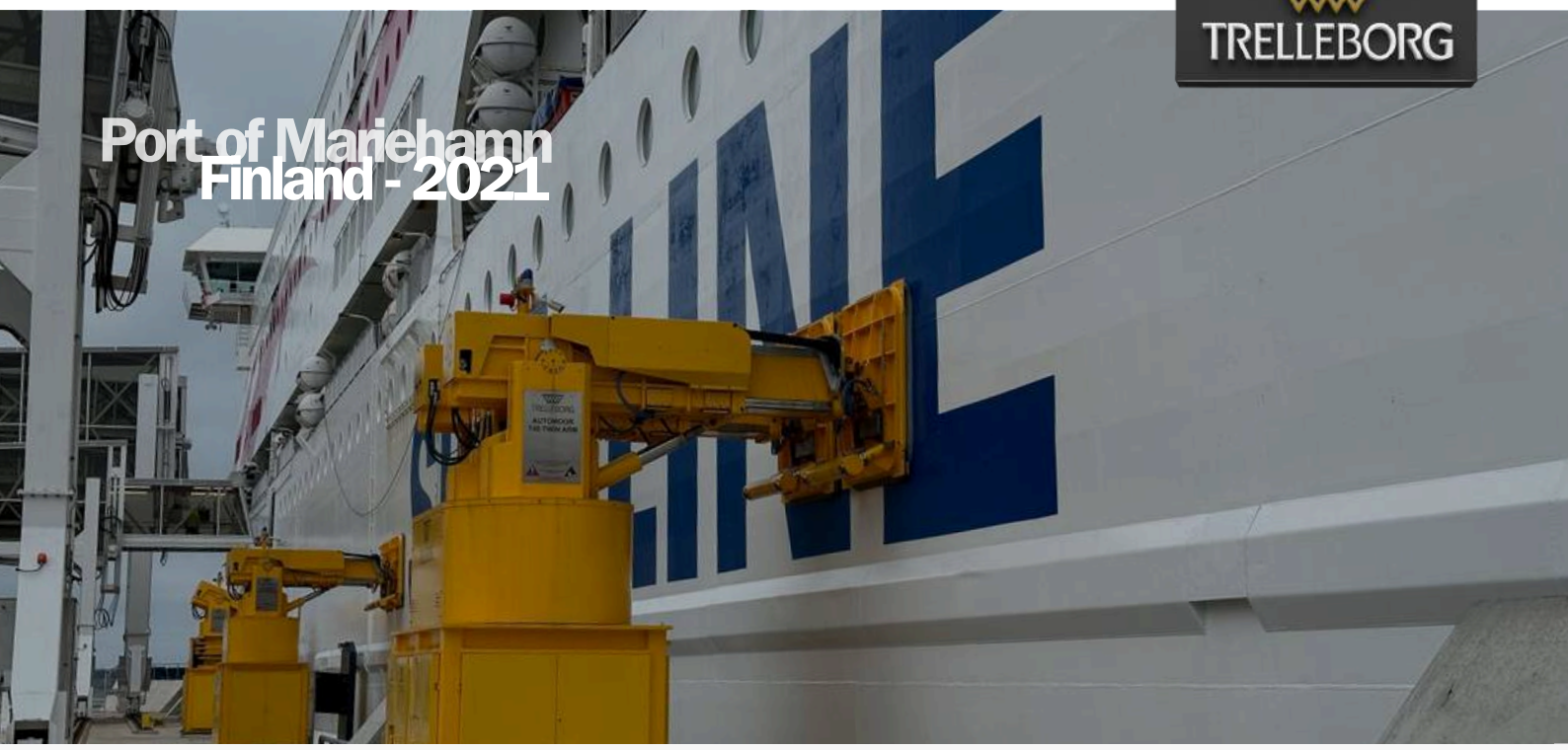

Port of Mariehamn Finland - 2021

Enhancing safe, low-emission berthing for RoPax and cruise vessels at Port of Mariehamn

CHALLENGE

Located in Finland's Åland archipelago, the Port of Mariehamn serves as a key Baltic gateway for international RoPax and cruise vessels, accommodating up to nine vessels of up to 223 metres in length.

The port needed a mooring solution that could:

- Safely handle large, diverse vessel types with varying hull geometries, door positions, and freeboards
- Operate reliably within a space-constrained berth, positioned between a passenger gangway gantry crane and the wharf edge
- Improve crew safety by eliminating manual rope handling
- Support the port's decarbonization objectives by reducing engine run-time during berthing

SOLUTION

Following a detailed site study, Trelleborg delivered a tailored rope-free mooring solution comprising six AutoMoor T40 Twin Arm systems, designed, manufactured, and installed to meet the port's specific operational requirements.

The twin-arm configuration allows the units to operate in sync or independently at varying heights, enabling secure attachment to vessels with different hull profiles and structural layouts. An integrated tide level monitoring system ensures optimal pad positioning for each vessel, further improving mooring accuracy and safety.

Compactly engineered for the restricted quay-side environment, AutoMoor secures vessels in under 30 seconds and releases them in just 15 seconds, reducing turnaround times, minimizing safety risks, and lowering emissions by limiting engine use while alongside.

Through close collaboration and site-specific engineering, Trelleborg has delivered a future-ready mooring system that enhances productivity, safety, and sustainability at the Port of Mariehamn.

Port of Mariehamn, Aland Islands
~3,000 moorings per year

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DOWNLOAD THE BROCHURE

Rope-Free Mooring Transforms Ferry Operations at Port of Långnäs

CHALLENGE

As an international ferry terminal operating in harsh Nordic conditions, the Port of Långnäs needed to manage high-frequency ferry traffic; around seven vessel calls per day, including ships over 220 metres long, while maintaining tight schedules between Finland and Sweden.

Traditional mooring with ropes posed multiple challenges:

- Safety risks for crews handling heavy, icy mooring lines in darkness and severe winter weather
- Operational inefficiencies during berthing and unberthing, especially in strong winds
- Vessel motion that impacted RoRo loading and unloading efficiency
- Growing pressure to reduce fuel consumption and emissions in line with environmental objectives

SOLUTION

The port implemented Trelleborg's AutoMoor rope-free automated mooring system, transforming daily operations.

Since installation in 2021, AutoMoor has enabled more than 2,700 safe and efficient moorings per year, securing vessels faster and more steadily than conventional ropes, even in adverse weather. The system significantly reduces vessel motion, supporting safe and efficient RoRo cargo operations, while remote monitoring allows crews to be redeployed to higher-value tasks.

By eliminating manual line handling, AutoMoor has dramatically improved safety, shortened turnaround times, and reduced fuel use and emissions, delivering measurable gains in safety, efficiency, and sustainability for the Port of Långnäs.

CATCH THE FULL STORY

> I would strongly recommend Trelleborg's AutoMoor system to other ports. It not only reduces environmental impact and turnaround times, but also dampens the rolling and movement of the ship more effectively than traditional lines. Additionally, it eliminates the need for my staff to handle heavy, icy lines especially in dark and harsh conditions. In terms of work safety, it's a major step forward.
>
> — Deputy Harbor Master,
> Port of Långnäs, Finland

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