

# Marine Shipbuilder Adds Superior Performance While Receiving Rapid PAC Upgrade On LPG Tanker

## RESULTS

- Rapid upgrade capability met stringent timeframe requirements
- Cost-effective migration solution allows retention of existing I/O and infrastructure
- PACSystems controllers' scalability provides future-proofing
- Advanced cybersecurity protects against attacks and unauthorized access

## APPLICATION

Control of liquid natural gas equipment on LPG tanker.

## CUSTOMER

Major European marine equipment supplier.

## CHALLENGE

The time available for a critical upgrade of programmable logic control technology, which managed the specialized reliquefaction system employed on one of the large LPG tankers operated by a prominent shipping company, was significantly constrained by the three-week dry dock turnaround timeframe. The time demands meant the supplier of the PAC would need easy and rapid integration into the existing system, maintaining the existing I/O cards and footprint. At the same time, the marine equipment supplier required significant upgrades in performance, reliability, scalability, remote monitoring and cybersecurity. The migrated system also needed to be exhaustively validated to declare the vessel seaworthy.



*The built-in security protocols and broad sweep of cybersecurity tools in the PACSystems controller helped this marine manufacturer protect against attacks and unauthorized access in the LPG sector.*

## SOLUTION

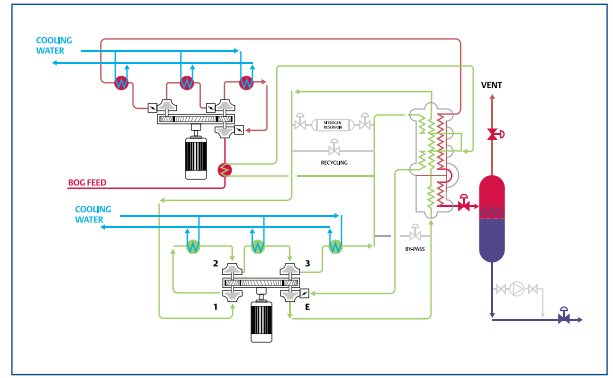
The Emerson PACSystems™ RX3i CPE400 modular programmable automation controller was selected by this award-winning marine equipment supplier to replace the existing unit due to its flexibility and rapid upgrade capability, as well as performance. The PACSystems controller has DNV-GL marine approvals and provided the manufacturer with a simple and cost-effective migration solution, with only the need to manufacture new sub-plates and install new carriers for the I/O. The controller connects to the reliquefaction system via a PROFINET network, which will provide vessel stakeholders with remote access to equipment, supporting improved maintenance planning in future operations. The PACSystems control technology also offered the additional functionality needed, including built-in security protocols and a broad suite of cybersecurity tools to help protect against attacks and unauthorized access.

The rapid integration capability of the controller allowed an on-schedule migration implementation and validation and ensured no exorbitantly costly delays at drydock.

## RESOURCES

### PACSystems

[www.Emerson.com/PACSystems](http://www.Emerson.com/PACSystems)



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