

RoRo conversion

Conversion of bow and stern arrangement for two-level traffic



ROPAX FERRY *ATLANTIC VISION*



New MacGregor stern arrangement with relocated lower ramp and new upper ramp



New MacGregor upper bow ramp stowed on 5th deck



2+2 quayside 35T MacGregor MOOREX mooring units and eight shipside mooring bollards were installed

The challenge

In 2008, the Estonian Tallink Group entrusted MacGregor's RoRo conversion team with a turnkey contract to convert the bow and stern ramp loading arrangements to two-tier traffic loading on board Atlantic Vision, which has been chartered for five years by Canadian company Marine Atlantic.

Prior to being awarded the contract, MacGregor carried out a study for Marine Atlantic to evaluate the vessel's suitability for three different ports in Canada. The target was to provide the vessel with the capability to:

- Load/discharge over the bow at two levels in North Sydney,
- Load/discharge over the stern at two levels in Port of Basques,
- Load/discharge over the stern at lower level (main deck) in Argentina.

The conversion solution

Our RoRo conversion team converted the existing lower stern ramp arrangement on deck 3, and installed a new upper stern ramp and a new upper bow ramp at deck 5.

The stern area was redesigned to suit the relocated starboard ramp, including hull vibration analysis and hull strength calculations.

The entrance to the steering gear room was relocated and the existing central casing removed. The port side stern ramp was dismantled and the starboard side stern ramp relocated. The relocated ramp was installed, along with new coaming, new transom sections, support pillars and hull reinforcements.

Installation and time schedule

The work was performed at Turku Repair Yard in Naantali, Finland and completed within the required time schedule.

MacGregor's scope of supply of cargo access equipment

- Design, manufacture and installation of the new upper bow and stern ramps, including all related equipment, hydraulic piping and electric cables.
- Design, manufacture and installation of the two new slope structures for the new upper bow and stern ramps.
- Design and installation of all necessary reinforcements of the ship's hull structure in the area of the new and modified equipment. Re-arranging emergency escape routes.
- Installation of four MacGregor MOOREX quayside mooring units to increase the mooring capacity, maintaining a constant tension on the mooring rope and keeping the vessel in position. Each 35-tonne

MOOREX mooring unit consists of a pulling device frame with jigger winch and a separate room for hydraulic and electric equipment. The units are installed at the quayside and corresponding mooring bollards are set into the side shell of the vessel.

- Arranging approvals from the classification society and taking full responsibility for the new technical concept.
- Testing, commissioning and start-up of the new and modified equipment.
- Crew training.

Atlantic Vision - main particulars

Owner: Tallink Group
Length, oa: 203m
Breadth, mld: 25m
Gross tonnage: 30,285gt
Draft: 6,58m
Passengers: 702
Cars: 531
RoRo system: MacGregor cargo access equipment
Year built: 2002 by HDW, Germany
Former name: Superfast IX



Lloyd's Register Quality Assurance certifies that the Quality Management System for Cargotec Marine is ISO 9001:2008 compliant.

MacGregor is the world's leading brand of engineering solutions and services for handling marine cargoes and offshore loads. MacGregor products serve the maritime transportation, offshore and naval logistics markets on board ships, as well as in ports and terminals. Our cargo flow solutions integrate cargo access, stowage, care and handling functions to suit a particular ship's cargo profile. This benefits its productivity, environmental impact and profitable service lifetime.

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