

RoRo conversion

# Ship and shore conversions add more ferry departures



**ROPAXES, NORFOLKLINE**

## The challenge

In 2002, MacGregor was awarded a contract to convert Norfolk Line's two RoPax ferries and the shore connection linkspan. The success of the new service offered by the two vessels *Midnight Merchant* and *Northern Merchant* on the highly popular route between Dover and Dunkerque, encouraged Norfolkline to increase the frequency of sailings by reducing turnaround times.

## Targets

- Increase the frequency and number of departures
- Reduce turnaround times
- Optimise cargo handling capacity.

## MacGregor's conversion solution for double-deck loading

MacGregor's conversion team undertook a major reconfiguration of the upper deck facilities to increase the ship's flexibility and enable access directly from the quay. The operation made it possible to feed traffic flow directly to the two deck levels and, hence, achieve a faster vehicle handling time by simultaneous loading/unloading on both cargo deck levels.

- Bow and stern conversion for two-tier linkspan operations by opening the front bulkhead, located at the bow on the upper vehicle deck, creating a driving passage for trailers over the mooring deck along with the provision of new bulkheads, fixed slope structures and a 'nose' extension
- Deck machinery moved outboard

- New mooring winch installed on starboard side
- Bulwark opened
- New bridge front door
- New internal fixed ramp to upper deck
- Stern ramp removed
- New side sliding stern doors.
- New landing platforms to stern
- The former train carrying two-tier linkspan extended by two 8.4m-long by 5m-wide outer ramps to access the vessel on two levels.

## Installation and time schedule

The entire project was carried out at sea and in port within two months. Each ship was out of service for only 10 days. As most of the installation work was carried out onboard during the ships' normal sailing schedule, a risk assessment and hot work application was

made at the local authorities to meet safety requirements. During the final stage the original stern ramp was removed, the extensions installed and the new stern door installation completed. A new front door was fitted and the mooring winches repositioned.

## Benefits

- Faster loading/unloading time, from two hours to around 30 minutes. Each ferry could add two more sailings every day.
- Increased flexibility.

## MacGregor's scope of supply

- Turnkey responsibility, including final painting, hiring of mobile/floating cranes for the final installation at the quay, just-in-time delivery of required materials to Dunquerque port.



Before conversion



After conversion



The original stern ramp was removed.



New two-panel side sliding stern door.



Front bulkhead opened to create a driving passage for trailers was created over the forward mooring deck.



Shore linkspan extended by two outer ramps for two-tier access to feed traffic flows directly to two deck levels.

## Main particulars

### Midnight Merchant & Northern Merchant

Type of ships: RoPax ferries

Owner: Norfolk Line (in 2002)

Length, oa: 180m

Breadth: 25m

Gross tonnage: 22,152gt

Draft: 7m

Passengers: 214

Lane metres: 2,130

Year built: 2000 by AESA, Spain



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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