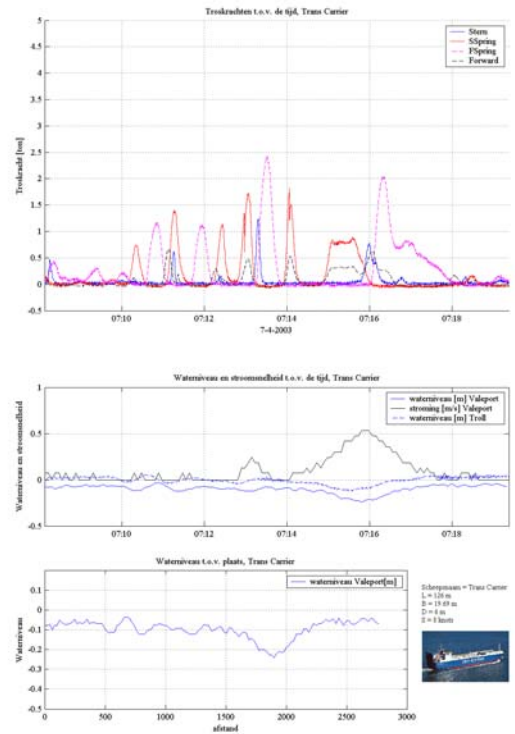




Passage of Trans Carrier and Maddalena D'Amato, as seen from the moored barge



Mooring forces and water movement during the passage of the Trans carrier

Impact of passing ship on moored vessel

The port of Amsterdam is aiming at future development of new berths for inland waterway transport along the approach canal between IJmuiden and Amsterdam. This canal is approximately 15 km in length and connects the port of Amsterdam with the locks in IJmuiden and the North Sea.

An initial feasibility study for the new berths revealed that problems were to be expected related to the movements and mooring forces of moored (inland waterway) ships due to the passing of large sea going vessels. For the port of Amsterdam this study was the reason to initiate a measurement program to address mooring forces and movements of a moored ship under the influences of passing vessels. During a period of 3 days and the passing of 19 large ships, water movement, ship mooring forces and ship mooring movements of an inland waterway barge have been measured.

The conclusions from these measurements and the following analysis are:

- Wave length of the primary wave as measured near the moored vessel has a length of approximately 2 times the length of the passing vessel.
- A revision of the calculation method is required to indicate the static mooring forces of the moored ship
- The expected maximum mooring forces and movements of a moored ship parallel to the channel axis, due to passing ships, remain within acceptable limits

Client
Amsterdam Port Authority

Location
Amsterdam

Date
2003

Services
Measurements of mooring forces, movements of a moored barge and water movement resulting from the influence of passing vessels

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