

# MOORING AND NAVIGATIONAL IMPACT STUDY, MALTA FREEPORT

Oiltanking Malta Ltd is the operator of the oil terminal at Malta Freeport in Marsaxlokk Bay. The terminal has its base in the basin between the main breakwater of the port and the container terminal areas. The oil terminal operates from 3 berths, all being located along the breakwater at the SE side of the basin. For reason of expansion Oiltanking Malta Ltd is investigating the suitability of using the outer end of the quay opposite the 3 existing berths.

Oiltanking Malta Ltd asked Svašek Hydraulics to investigate the feasibility of this jetty location for berthing and operating tankers up to a dwt tonnage of 50,000 under different circumstances of berth occupancy, taking into account loading conditions and limiting wind conditions.

The different scope items of the study are:

1. Analysis of the wind and deep water wave statistics outside Marsaxlokk Bay.
2. Wave penetration study to assess the design wave at the berth. The wave penetration computations are carried out with the HARES wave model.
3. Mooring simulation study to determine the dynamic behaviour of a tanker at the new berth, the line and fender forces and the limiting environmental conditions (wind and wave) for safe berthing. For this study the model TERMSIM is applied.

4. By combining the results of item 2 and 3, the total expected number of downtime days for tanker operations is determined.
5. On the basis of the mooring simulations the mooring layout, the specifications of the mooring lines, the mooring hooks and the fenders are specified. The suitability of the existing structure to take the mooring loads is also assessed.
6. The safety of navigation to and from all berths in the Oiltanking Basin is assessed for different environmental conditions by a desk study.

CLIENT

Oiltanking Malta Ltd

LOCATION

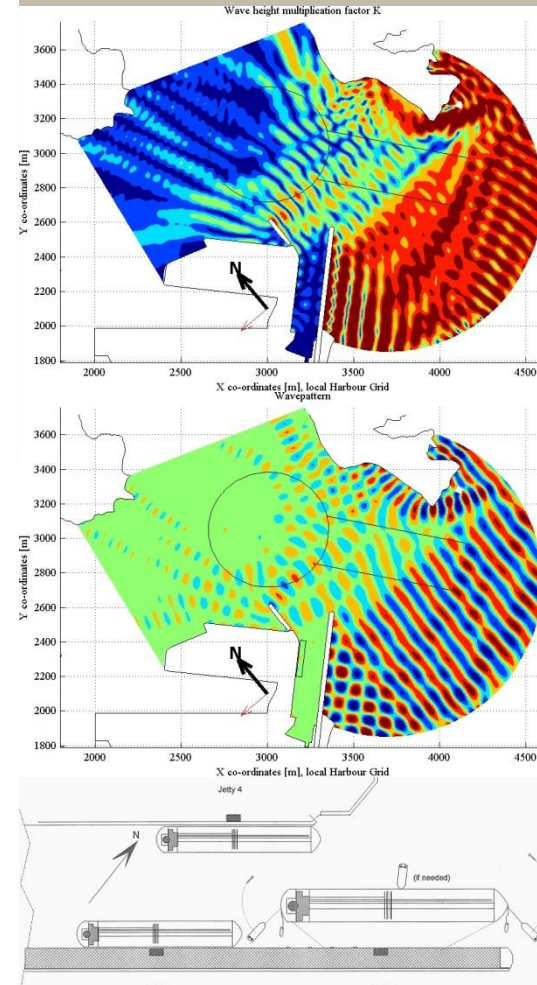
Malta Freeport, Marsaxlokk Bay, Malta

DATE

2004

SERVICES

Wind and wave statistics,  
HARES wave penetration study,  
TERMSIM mooring simulation,  
Downtime analysis,  
Specification mooring layout,  
Navigational study.



**SVASEK**  
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