



Costa Concordia Metocean Conditions

Rina Services SpA has requested a Metocean report on behalf of cruise ship Costa Concordia which grounded on 13 January 2012 in the Tyrrhenian Sea just off the shore of Isola del Giglio, near the western coast of Italy. The Metocean report describes data collection, transformation of the sea state from deep water to the location of the Costa Concordia using SWAN numerical modelling and derived operational and extreme statistical results.

Time series (3 hourly) of 10 year period generated by ECMWF numerical wave modelling are used as boundary conditions for SWAN modelling.

The following statistics of wind and wave conditions at the location of the Costa Concordia are presented:

- Annual wave climate in the form of H_s/T_p scatter diagrams
- Directional wave climate
- Duration of storms statistics
- Extreme annual and seasonal values for return periods of 1, 2, 3, 5 and 10 years
- Maximum wave height
- Swell wave height

Client
Rina Group

Location
Italy

Date
2012

Services
Operational sea state conditions
Extreme sea state conditions
High quality time series
Extreme Statistics

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