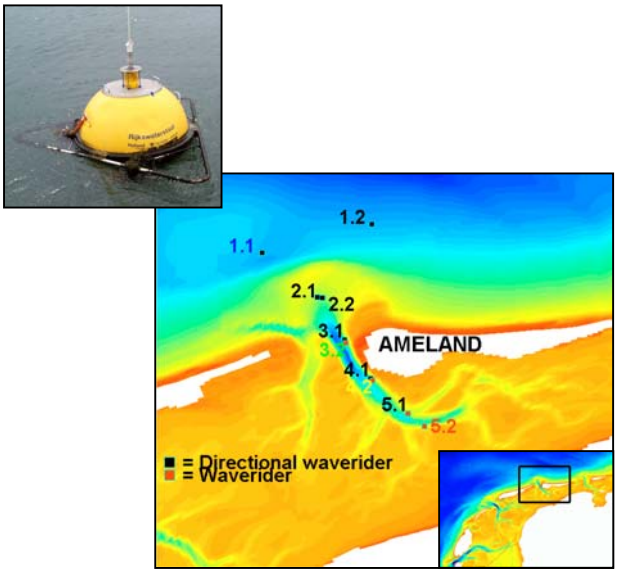

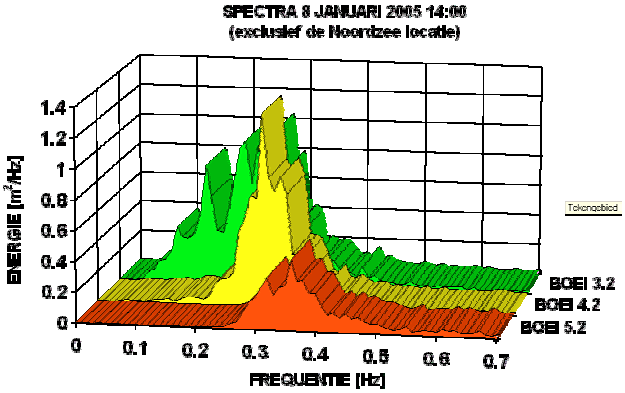

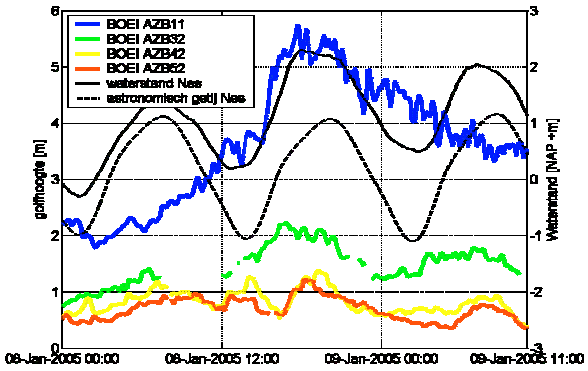

Measurement report tidal inlet Ameland for the storm season 2004-2005

Since the end of 2003 wave measurements are carried out in the Wadden Sea, in and nearby the tidal inlet of Ameland. These wave measurements are carried out in order to gain insight in the development of the waves in a tidal inlet system and serve the support of the Hydraulic boundary conditions. In addition these measurements are used to tune and validate numerical wave models (like SWAN).

Svašek Hydraulics described and analysed the wave measurements during the storm season 2004/2005 (1 December 2004 - 1 May 2005). During storm events high waves are generated at the North Sea (at locations 1.1 and 1.2). Due to wave breaking on the shallow outer delta and the wave refraction to the slopes of the channel (including energy dissipation) the wave heights and wave periods reduces going from location 1 to 5 (see figure).

In this measurement campaign Rijkswaterstaat has used two types of wave buoys, the directional and non-directional waverider. The main reason of the use of the second type of wave buoy is the higher sampling frequency of the second buoy (the non-directional waverider), which is important in order to measure short waves accurately. Svašek Hydraulics compared the measurement results of the two buoy types and analysed the influence of the higher sampling frequency on the accuracy of the measured waves.

Client
Rijkswaterstaat RIKZ

Location
Tidal inlet Ameland, The Netherlands

Date
2005

Services
Analysis and description of the measurements

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