

## OFFSHORE Activities AMRUMBANK WEST

A success across the board! In collaboration with E.ON, Winkra, Rennert, Hochtief, Muhibbah and Weserwind, in April 2005 the first commercially operated measurement tower in Germany was completed. THALES was **responsible** for all electronics equipment for the wide range of measurements.

- >> 24 sensors measuring climatic and water conditions
- >> 34 sensors supplying data on deformation of the monopile structure
- >> 22 measurement points supplying condition monitoring data
- >> Solar modules, wind generators and diesel generators providing power supply
- >> A short-wave transmitter and satellite modem ensuring data transmission
- >> State-of-the-art radio and lighting technology ensuring maritime and flight safety

In close cooperation with the Institut für Statik und Dynamik in Hanover, commissioned by ARGE with Hochtief construction AG and with the support of initiator Germanischer Lloyd, the monopile structure for the AmrumBank West measurement tower was taken into operation by Thales, with 34 applied sensors (strain gauges and acceleration) resistant to ramming and submersion. 31 sensors and cableways have successfully withstood ramming with acceleration of up to 700g and have been supplying valuable information since April 2005.

- >> E.ON Energy Projects GmbH
- >> WINKRA-Energie GmbH
- >> Rennert Offshore GbR
- >> HOCHTIEF construction AG
- >> Muhibbah Marine Engineering GmbH
- >> Weserwind GmbH



- >> Institut für Statik und Dynamik
- >> Germanischer Lloyd WindEnergie GmbH