



STAND-ALONE WAVE MONITORING SYSTEM WITH DATA SENT VIA VHF AND GPRS TO THE CONTROL CENTRE

24/7 wave direction and height monitoring system with data sent
to the control and management centre

Supply: 2007

Maintenance: 2007-in progress

Municipalities: Cesenatico



CHALLENGE

Execution of a stand-alone wave direction and height monitoring system in a harsh environment like that of the sea.

WHY ETG?

The wealth of experience that ETG has acquired in the weather instrumentation sector and in real-time monitoring data acquisition, archiving, processing and circulation makes it a valuable collaborator.

INTRODUCTORY SECTION

The monitoring system in question consists of a directional accelerometer buoy able to measure wave direction and height in real time 24/7.

The system sends monitoring data directly to the Arpa Emilia-Romagna control centre through double-vector VHF radio and GPRS mobile transmission.

The network and the entire system are managed and controlled by servers in hot reserve mode.

THE SOLUTION

In order to adequately, and even better, meet the customer's requirements, ETG supplied the customer a complete system including both the field portion (wave meter buoy including datalogger, power supply unit and accelerometer sensor system) and the centre portion by installing servers in hot reserve mode.

The system was engineered to be able to operate in a harsh environment like that of the sea, so the materials used are extremely resistant and totally free of the corrosion typical of salt water.

Moreover, the buoy anchoring system is such as to guarantee its secure fastening even in adverse conditions.

Should the anchoring system break, the buoy has been fitted out with a GPS system for satellite tracking. This allows ETG and the customer to know the exact position of the monitoring buoy at all times.

THE BENEFITS

The proposed solution allows the wave motion - both direction and height - to be monitored 24/7. This is guaranteed at all times, even in rough sea conditions.

The GPS tracking system then keeps the position of the system under control at all times in order to prevent the buoy from being lost in the case of accidental unfastening of the support at the bottom of the sea.

SUCCESSFUL DATA

The system and accelerometer buoy are able to guarantee reliable data in real time. This is due to the materials that ETG uses and the maintenance service, active still today.

CLOSING SECTION

Every new monitoring system engineered by ETG entails peculiarities that can be solved only by those - like our company - that have been working in the sector for years.

The system built for Arpa Emilia-Romagna involved a study and a shrewd choice of both the materials used and the installation technologies.

