



June 2011

## Inventec is awarded the contract for the monitoring system at the EMO terminal.

Main contractor Van Hattum en Blankevoort has assigned to Inventec the order for the design, supply and installation of a structural monitoring system for the extension of the coal and ore terminal of EVO in the Rotterdam Mississippi harbour.

This permanent monitoring will consist of:

- Erosion detection of the subsoil behind the quay-wall by means of geotextile with integrated optical fiber. The fibers are interrogated on a continuous basis with DSS (Distributed Strain Sensing). Deformations that indicate an impending collapse are detected with a 1,0m accuracy over the 485m length of the quay-wall.
- Monitoring of the anchoring forces by means of fiber optic strain sensors that are embedded in the hollow core of the grout anchors.
- Monitoring harbour water level and the groundwater level behind the quay-wall. Also for this fiber optic sensors will be installed.
- Data processing and data management. The local instrumentation room will have a wireless connection with our web server on which the





terminal owner (Port of Rotterdam) can log-in. Whenever pre-set measurement values are reached, the Port authorities automatically receive a warning or an alarm via SMS and email.

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