

MONITORING OF THE NAVAL REFURBISHMENT DRY DOCKS

BREST - FRANCE

Automatic Monitoring of the Dock Stability and hydraulic parameters

The Brest arsenal is in charge of the maintenance of the aircraft carrier « Charles-de-Gaulle » and other large naval vessels. The repair and refit works are taking place in a dry dock constructed in 1910, the dimensions of the dock are 318 m long, 49m wide and 18.4 m deep.

Detailed studies concerning the dock condition have highlighted several problems on the oldest sections of the side-wall: cracks to the facing material of the wall and to the walkways, water egress, areas of high moisture levels, showing deterioration of the masonry and of the base slab. The refurbishment and repair works to the dock were implemented by the Maritime Works Department.

SolData was responsible for the installation and management of a real time monitoring system consisting of both manual and automatic sensors that were able to be read and reported in real time in order to monitor the structural stability of the dock.

Configuration of the monitoring system:

The monitoring system included automated tide gauges, barometers, Water level and temperature measurements, piezometric levels, interstitial pressure sensors as well as the continuous measurement of the applied loads on the tie beams throughout the construction program.



CLIENT :	MINISTRY OF DEFENSE
CONTRACTOR:	MARITIME WORK DEPARTMENT
SCOPE OF WORKS :	
- 130 instruments supplied and installed:	
<ul style="list-style-type: none">• Automatic in-place inclinometer chains, crackmeters and manual inclinometers• Vibrating wire Piezometers for: water level measurement, tide gauges• Flow meters• Load cells• Barometers, Temperature sensors, Hygrometers	
- 100 manual levelling points within the dock	
- 120 weep holes	