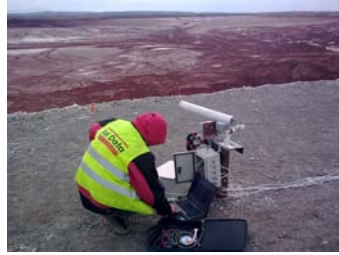


Real time automatic monitoring system DEVECSEK - HUNGARY

Continuous monitoring of the red sludge reservoir of the Ajka alumina factory for the prevision of the future movements of the dam



On the 4th October 2010, Hungary witnessed the worst ecological catastrophe the country ever had to manage. The dam of the caustic waste reservoir, n°10, at the Ajka alumina factory collapsed and its dangerous content flooded the surrounding area and villages. It caused extreme damage to the environment, the fauna and the population. Threatening the lives of thousands of people and ultimately killing ten.

After the incident, as part of the surveillance of the dam, the National Directorate General of Catastrophe Management contracted SolData to install and maintain an automatic monitoring system. The system must be able to continuously determine structural movements and to operate without direct site intervention in this dangerous area.

SolData installed a monitoring system composed of two basic elements. The primary element was SolData's CYCLOPS system which, in this instance, consisted of one automatic theodolite and six high precision prisms. The second consisted of six automatic tiltmeters located on the critical parts of the dam. This approach was adopted because it allowed structural performance monitoring in all meteorological conditions.

Via a radio link, a central database computer collected all measured data. The system allows the data to be managed and the results are accessible in real time via the internet on computers provided by the Client.

Geoscope, the visualisation and data management software, developed by SolData allows an intuitive way to interrogate the result throughout the lifetime of the project and represent the data graphically or in tabular format.

Via SMS and email, an automated notification is configured to notify nominated persons if predetermined trigger values are breached. This then allows specific corrective actions to be undertaken.



The complete system allows continuous observation of the dam's movements, allowing risk mitigation for the environment, property and providing increased protection to the population.

CLIENT:	OKF – NATIONAL DIRECTORATE GENERAL OF CATASTROPHE MANAGEMENT
CONTRACTOR:	SOLDATA
CONTRACT PERIOD:	DECEMBER 2010 – JANUARY 2011
TECHNICAL DESCRIPTION:	
<ul style="list-style-type: none">• Real time automatic monitoring system• 1 CYCLOPS• 6 high precision prisms• 6 automatic tiltmeters• Radio data transmission system• Real time visualisation via Geoscope• Automatic alarm system : by SMS and e-mail	