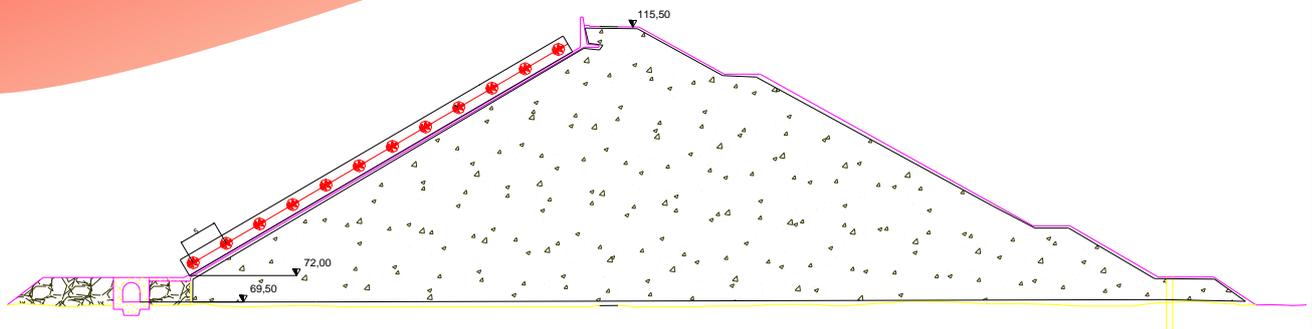


DAM SLOPE DEFORMATION MEASURING SYSTEM



Special instruments have been designed and developed by AGISCO to measure deformations occurring on dam slopes.

They employ special gauges and are fixed inside protective casings.

Measurements are generally taken by automatic reading units and the data is processed by specific software allowing calculation of the slope deformation curve with significant accuracy.

The gauges supply rotation readings which are transformed, by specific algorithms, into a continuous deflection curve of the slope profile to an accuracy of a tenth of millimetre.

The entire measuring and calculating process being automatic, supplies information in real time and at pre-set schedule.

The operating principle is based on how far the measuring device, fixed to a rigid supporting frame, rotates from its concrete foundation due to deformation down the inclined face of the dam.

The supporting frame allows a perfect alignment of the measuring system so to compensate for the incline of the concrete dam slopes.

In addition the supporting structure has the essential task of averaging the rotation measurements on a significant base (1 m at least).

A specifically designed and assembled protection system prevents the sensors and the supporting frame from thermal variation influence.

Each alignment is made of "n" points, each being fixed to the concrete through the supporting frame by special anchoring devices.

Knowing the sensor location, the distance between the different anchoring points and the rotation measured at each point, it is possible to compute, thanks to a specific software called "ECLIPSE", the entire deflection curve of the dam slope deformation.

As an example: in order to obtain an ordinary alignment a sensor spacing every 6-7m will produce a deflection curve with accuracy better than one mm and sensitivity of one tenth of mm.

A robust shield is installed up to the dam crest to protect the entire measuring system against shocks.

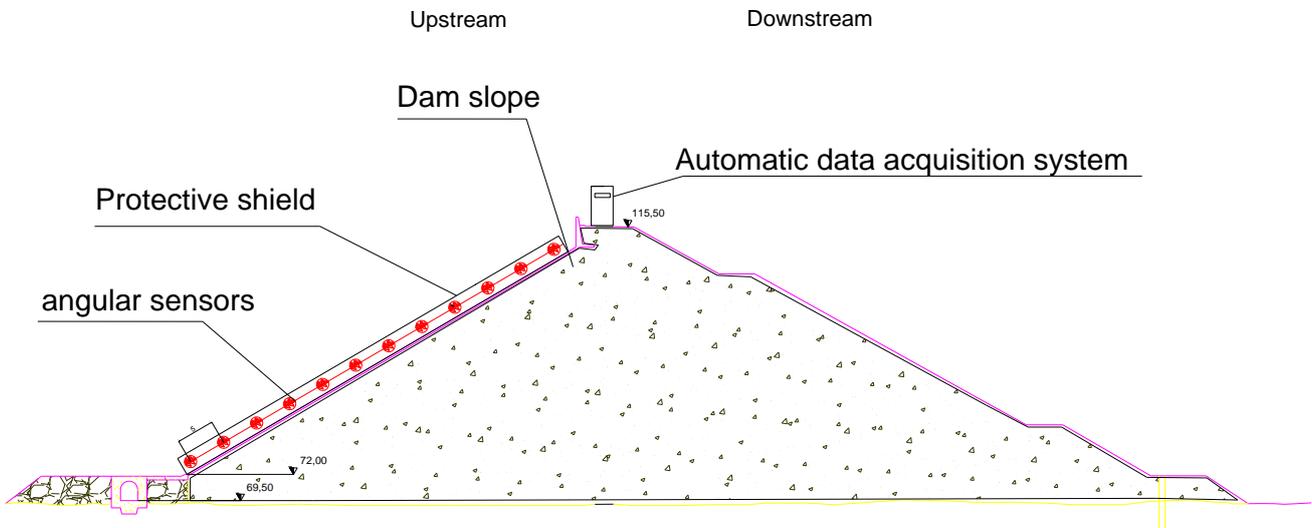
On request a special version of the dam alignment monitoring system may be supplied to allow easy maintenance under any reservoir level condition.

The system is designed to remove and replace any of the sensors for maintenance and check.

The characteristics of this system when used for upstream slope monitoring may be summarised as follows:

- Easy installation
- High resolution

- Remote automatic readings
- Excellent value for money
- High accuracy, higher than correspondent much more expensive systems using servo-accelerometers
- Long term reliability



TECHNICAL SPECIFICATIONS

DAM SLOPE DEFORMATION MEASURING SYSTEM

Measuring points	as a function of the casing length: max. 1 every 1.5 meters
Measuring range	+/- 1 degree
Output signal	Voltage: +/-2.5V or Current 4-20mA
Supply	9-20 V dc
Accuracy	0,0005 degree (on a 1 m. base)
Gauge length	max. 100 - 150mm

Agisco reserve the right to change their products and specifications without notice

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