

## DIMETIX APPLICATION EXAMPLE

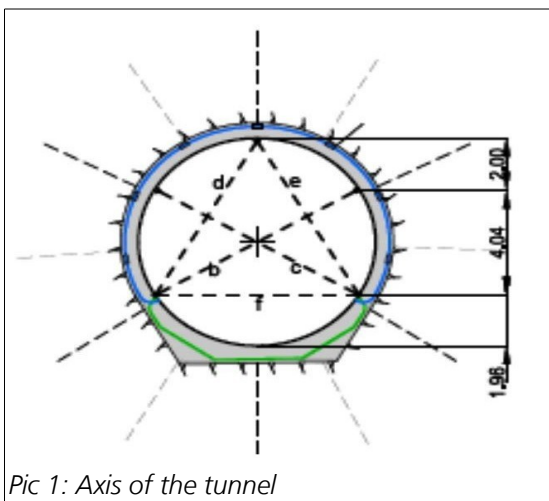
AE-0202

### MONITORING OF PRESSURE TUNNEL

**Industry :** Geodesy & Construction

**Application type :** Monitoring

#### Brief description



Pic 1: Axis of the tunnel

The Swiss company Solexperts charges the test track in OW DST (headwater pressure tunnel) while the injections for passive bias to monitor automatically. The task was 3 sections with 5 sampling lengths to automatically monitor and exceed limits an alarm lamp to set so that the injections are stopped in operation. The profiles have been arranged at a distance of about 20 m. For this Dimetix laser sensors are used that are ideal for these harsh environments due to their robustness and precision measurements.

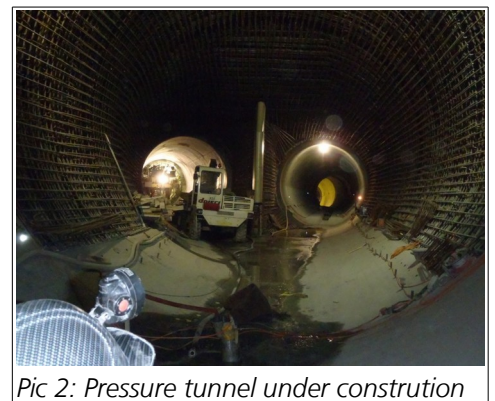
#### Passive bias of penstocks

The penstocks are performed with a non-reinforced concrete inner shell of thickness 0.5 m. To accommodate the corresponding tensile stresses in the concrete lining (internal pressure), a passive bias of the concrete shell is required. For this purpose, an injection pressure is applied in the annular gap between the spray concrete

lining and the concrete shell. To harden and seal a consolidation injection is carried out beforehand in the surrounding mountains through holes and Einfachpacker.

#### Customers advantages

- Easy installation thanks to the visible laser
- Operating in large temperature range (-40 .. + 50 ° C) possible
- Maintenance free
- Measuring range up to 500 m
- Accuracy +/- 1 mm



Pic 2: Pressure tunnel under construction

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