



## **Operation and Maintenance of Hydro tunnels**

**Objective**: To provide a global overview of all the main issues regarding operation, maintenance and repair of tunnels, shafts and caverns in an underground hydroelectric complex.

## Session 1: Performance criteria of an underground hydro plant - Feedback from experience

09:00-09:15 Welcome and opening

09:15-10:00 Types of tunnel lining for hydro tunnels – advantages and disadvantages

10:00-10:45 Performance criteria of a hydro tunnel

10:45-11:15 Coffee Break

11:15-12:00 Introduction to the main structural disorders and defaults in hydro tunnels

12.00-12.45 Lessons learnt from previous accidents during operation

12.45-13:00 Discussion

13:00-14:00 Lunch

## Session 2: Inspection and maintenance – Asset management

14:00-14:45 Case Study: Waterproofing membrane under high hydraulic head

14:45-16:00 Round table about Inspection, maintenance and repair issues

- Introduction to the topic
- Exchange with the audience (with all experts)

16:00-16:30 Other case Studies

16:30-17:00 Discussion and closing