

Objective: Due to the great variability in the ground conditions, monitoring has an essential role in Tunnelling. It is the only effective mean to allow the tunnel design and construction procedures to be adjusted and validated. The course is of interest for owner, designer and construction engineers, supervisors and managers.

Tentative Programme

Session 1: Introduction and Overview

- 09.00 – 09.45: Welcome and Opening: ITA and local representatives
- 09.45 – 10.30: General presentation on tunnel monitoring (objectives, why, what and who)
- 10.30 – 11.00: Coffee Break
- 11.00 – 11.45: Types of instruments
- 11.45 – 12.30: Instrument installation
- 12.30 – 14.00: Lunch

Session 2: Methods and Interpretation

- 14.00 – 14.45: Monitoring methods and layout in conventional tunnelling
- 14.45 – 15.30: Monitoring methods and layout in mechanised tunnelling
- 15.30 – 16.00: Coffee Break
- 16.00 – 16.45: Design criteria of monitoring and relationship to tunnel design and construction
- 16.45 – 17.30: Monitoring interpretation methods
- 17.30 – 18.00: Questions and Answers

Session 3: Examples

- 09.00 – 09.45: Hazards warning level and countermeasures in conventional tunnelling
- 09.45 – 10.30: Hazards warning level and countermeasures in mechanised tunnelling
- 10.30 – 11.00: Coffee Break
- 11.00 – 11.45: Example 1 on conventional tunnelling
- 11.45 – 12.30: Example 2 on mechanised tunnelling
- 12.30 – 14.00: Lunch

Session 4: Monitoring interferences, contractual responsibilities and risk management

- 14.00 – 14.45: Interferences with excavation works (time consumption and costs)
- 14.45 – 15.30: Contractual aspects (reading, analysis and decision on countermeasures)
- 15.30 – 16.00: Coffee Break
- 16.00 – 16.45: Role of monitoring on risk management
- 16.45 – 17.30: Case histories
- 17.30 – 18.00: Summary and Closing of the Seminar