

Principles for Tunnel Design

20-21st April 2017, Selangor, Malaysia

Objective: To provide design and construction elements to young professionals related to the best practice of tunnel design.

20th April

Session 1: Introduction and Overview on Tunnel Design

09.00-09.15: Welcome and opening
09.15-09.45: Design Philosophy
09.45-10.30: Geologic and geomechanical survey
10.30-11.00: Coffee Break
11.00-11.45: Settlement design
11.45-12.30: Specific parameters affecting design

12.30-14.00: Lunch

Session 2: Choosing the appropriate construction method during design

14.00-14.45: Conventional tunnelling in hard rock
14.45-15.30: Conventional tunnelling in soft ground
15.30-16.00: Coffee Break
16.00-16.45: Mechanized tunnelling (TBM and support systems)
16.45-17.30: Health and safety issues and impact on tunnel design
17.30-18.00: Questions and answers

21st April

Session 3: Design and calculation methods

09.00-09.45: Rock engineering design
09.45-10.30: Analytical and numerical methods
10.30-11.00: Coffee Break
11.00-11.45: Risk Management – Contractor's perspective
11.45-12.30: Design of face pressure, soil conditioning and backfilling for TBM

12.30-14.00: Lunch

Session 4: Specific aspects of tunnel design

14.00-14.45: Monitoring and control for conventional and mechanical tunnelling
14.45-15.30: Case study of a complex urban tunnel: Monaco
15.30-16.00: Coffee break
16.00-16.45: Case study 1: SMART Design experience
16.45-17.30: Case Study 2: Urban tunnelling in Singapore
17.30-18.00: Closing Remarks