

Tunnelling in urban areas

Objective of the course: to present to students & young professionals the design & construction approaches for tunnelling in urban areas.

Day 1

Session 1: General

08:30 – 09:00: Welcome & Opening – Objectives of the course
09:00 – 09:30: General aspects of urban tunnelling
09:30 – 10:30: Environmental issues
10:30 – 11:00: Coffee break

Session 2: Tunnelling Methods

11:00 – 12:00: Presentation of the different tunnelling methods
12:00 – 13:00: Choice of the tunnelling methods
13:00 – 14:30: Lunch

Session 3: Mechanized Tunnelling Methods in Soft Ground

14:30 – 15:30: Specificities of mechanized tunnelling in soft ground
15:30 – 16:30: Slurry shield, EPB & Soil Conditioning
16:30 – 17:30: Discussion round table style

Session 4: Design

08:30 – 09:30: Segment lining design for mechanized tunnelling
09:30 – 10:30: Conventional tunnelling in soft & ground reinforcement
10:30 – 11:00: Coffee break

Session 5: Special Aspects

11:00 – 12:00: Risk analysis
12:00 – 13:00: Site investigation
13:00 – 14:30: Lunch
14:30 – 16:00: Monitoring of the surface & of the machine
16:00 – 17:00: Discussion round table style

Day 2

Session 6: Operation & Maintenance

08:30 – 09:30: Safe operation in urban transport tunnels
09:30 – 10:30: Maintenance in urban transport tunnels
10:30 – 11:00: Coffee break

Session 7: Case histories

11:00 – 12:00: Mechanized tunnelling 1) EPB, Mixed Shield, Multi Modes
12:00 – 13:00: Mechanized tunnelling 2)
13:00 – 14:30 – Lunch
14:30 – 15:00: Ground improvement
15:00 – 16:00: Conventional tunnelling
16:00 – 16:30: Questions/Answers
16:30 – 17:00: Closing