Main opportunities and technical issues in tunnelling

Dubai 2018

21-22 April

Objective: After a first day dedicated to a general introduction on the advantages and main features related to tunnels and underground space use, especially in urban areas, the second day will focus on several technical topics of particular interest in a sustainable approach of the underground infrastructures.

Saturday, the 21st of April:

Session 1: Introduction to underground solutions planning

08.45-09.00: Welcome and Opening: ITA and country representatives (Prof. T. Celestino)
09.00-09.45: Advantages and disadvantages of underground solutions (Prof. T. Celestino)
09.45-10.30: Illustrated examples of solutions and missed opportunities (H. Admiraal & A. Cornaro)

10.30-11.00: Coffee Break

11.00-11.45: Underground sustainable solutions for urban planning (W. Broere)
11.45-12.30: The key stakeholders – organisation and responsibilities (M. Neunschwander)

12.30-13.30: Lunch

Session 2: Decision process and project management

14.00-14.45: Key planning and design issues (F. Amberg)
14.45-15.30: Legal and compensation issues for underground space (Prof. A. Dix)

15.30-16.00: Coffee Break

16.00-16.45: Case study 1: Environmental impacts of tunnel construction in urban areas (J. Rohde)
16.45-17.30 Case Study 2: Sao Paulo Metro - key elements in the decision process
17:30-18:15: Integrating health and safety - from planning to operations (Dr. D. Lamont)
18.15-18:45: Discussion

Sunday, the 22nd of April:

Session 3: Technical aspects

08.45-09.30: Preliminary investigations and main parameters (P. Grasso)
09.30-10.15: The construction methods and their fields of application (Prof. R. Galler)

10.15-10.45: Coffee Break

10.45-11.15: Case study 3: Launch of a TBM in shallow tunnels (K. Imakura)
11.15-11.45: Case study 4: Waterproofing issues: new developments (Prof. D. Peila)
11.45-12.15; Case study 5: Short and long term effectiveness of bolt systems (G. Volksmann)
12.15-12.30: Discussion

12.30-13.30: Lunch

Session 4: Specific underground structures

14.00-15.00: Underground space use for energy storage based on the examples of ALACAES and RICAS (F. Amberg /Prof. R. Galler)
15.00-15.45: Underground utility tunnels for a sustainable city (H. Admiraal & A. Cornaro)

15.45-16.15: Coffee Break

16.15-16.45: Case study 6: Singapore: underground planning and project management (Dr. Jeya)
16.45-17.15: Case study 7: Operation and asset management of underground space (Dr. R. Leucker)
17.15-17.45: Discussion and closing remarks