

Bangkok 18-19 November 2010

Principles of Tunnel Design and Construction

Programme - Day 1 - Thursday 18th November 2010

Session 1: Introduction and Overview on Tunnel Design and Construction

Dr. Harald Wagner, Expert to the ITA Executive Council

Dr. Noppadol Phien-Wej, Associate Professor, Asian Institute of Technology

09.00 – 09.15: Welcome Notes and Opening of ITA CET Training Course

09.15 – 10.15: Design philosophy : Tunnel Design and Management by Design

10.15 – 10.45: Coffee Break

10.45 – 11.30: Special Features and Stages of Tunnel Design

11.30 – 12.30: Geo-Investigations and Tunnel Modelling Parameters

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12.30 – 14.00: Lunch

Session 2: Tunneling Methods

Mr. Soren Eskesen, Vice President, International Tunnelling and Underground Space Association (ITA)

14.00 – 14.30: Types and Uses of Tunnels and Caverns

14.30 – 15.30: Construction Methods and Aspects Effecting Design

15.30 – 16.00: Coffee Break

16.00 – 16.45: Excavation in difficult ground (Cavities, Fault zone etc.)

16.45 – 17.30: Monitoring for conventional and mechanized tunneling

17.30 – 18.00: Questions and Answers

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Session 3: Conventional Tunneling

Professor In-Moo Lee, President, International Tunnelling and Underground Space Association (ITA)

09.00 – 09.45: Sequential excavation in soft ground and hard rock

09.45 – 10.30: Structural designs (Calculation, Dimensioning, Face Stability)

10.30 – 11.00: Coffee Break

11.00 – 11.45: Ground reinforcement techniques

11.45 – 12.30: Water control and drainages

12.30 – 14.00: Lunch

Session 4: Mechanized Tunneling

Mr. Lars Babenderde, Animateur, International Tunnelling Association WG I4

14.00 – 14.30: TBM types, support Systems

14.30 – 15.30: Interface between TBM and Lining

15.30 – 16.00: Coffee Break

16.00 – 16.45: Design of face pressure related to soil condition, backfilling

16.45 – 17.30: Segment lining design for soft ground and hard rock

17.30 – 18.00: Summary and Closing