

Sponsored by ITA/CET

THE 1ST TRAINING COURSE ON TUNNELLING IN URBAN AREAS

HANOI, VIET NAM

WEDNESDAY 09 — FRIDAY 11 APRIL, 2014

1401 HALL – RAILWAY PROJECT
MANAGEMENT UNIT (RPMU)

Plot D20 – Ton That Thuyet Street,
Cau Giay, Ha Noi



FECON

INTRODUCTION

Construction of METRO tunnels in cities have always posed a major engineering challenge: in addition to the usual construction difficulties and uncertainties associated with underground excavation, existing infrastructure is unavoidably affected, since it is unlikely to have been designed to withstand the deformation in the foundations that tunnelling causes. The problem is even more acute when the tunnel is in a densely-populated area, such as in Ha Noi and Ho Chi Minh City, where the buildings and other infrastructure (roads and public utility systems) are quite old and are not well planned. Consequently, the construction organizations (owner, designers, consultants and contractors) are responsible for completing the project successfully in all aspects, especially in interactions with the surroundings.

In order to create a wonderful chance for Vietnamese civil engineers, researchers, and construction managers can approach the advanced technologies in construction of urban tunnel projects in whole cycle of construction processes such as from investigation works, design works, construction works, monitoring works, operation and maintenance works, Foundation for Education and Training on Tunneling and Underground Space Use (ITACET), Vietnam Tunnelling Association (VTA) in co-operation with FECON Institute of Foundation and Underground Engineering will organize a training course regarding the Tunnelling in Urban Areas, which will be held from April 09th- 11th, 2014 at 1401 Hall of Railway Project management Unit (RPMU), Plot D20 – Ton That Thuyet street, Cau Giay district, Hanoi, Vietnam.

During this training course, six global leading well-known experts who have many practical experiences in urban tunnel construction, will provide to attendees all the necessary new knowledge from design, construction, risk management and operation for urban tunnel constructions. More importantly, after finishing the training course, all attendees will be received a certification from International Tunnelling and Underground Space Association (ITA). This is very necessary for the professional career of each civil engineer in general and for each geotechnical engineer in particular.

COURSE SESSION

The training course will focus on the following items:

- 1 GENERAL ASPECTS OF URBAN TUNNELLING
- 2 TUNNELLING METHODS
- 3 MECHANIZED TUNNELLING METHODS IN SOFT GROUND
- 4 URBAN TUNNEL DESIGN
- 5 SPECIAL ASPECTS IN URBAN TUNNEL CONSTRUCTIONS
- 6 OPERATION AND MAINTENANCE FOR URBAN TUNNEL
- 7 CASE HISTORIES OF URBAN TUNNEL CONSTRUCTIONS

LECTURER

The lectures in training course will be given by six global leading experts in tunnelling, nominated by ITA.

- **MR. MICHEL DEFFAYET**,
Director of Tunnel Study Center (CETu), France
- **MR. LARS BABENDERERDE**,
Babendererde Engineers, Germany
- **MR. ROBERT GALLER**,
Ex-President of Austrian Tunnelling Association, Austria
- **MS. KARIN BÄPPLER**,
Herrenknecht, Germany
- **MR. SØREN ESKESEN**,
ITA President, Denmark
- **MR. FELIX AMBERG**,
President of Amberg Group, Switzerland

CERTIFICATE

A certificate issued by the International Tunnelling and Underground Space Association (ITA) will be delivered to participants who fulfil the 3 days training course.

TIME SCHEDULE

WEDNESDAY 09

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 Method

13:00 – 14:30 Lunch break

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 and Soil Conditioning

16:30 – 17:30 Discussion Round table style

THURSDAY 10

Session 4: Design

08:30 – 09:30 Segment Lining Design for Mechanized Tunnelling

09:30 – 10:30 Conventional Tunnelling in soft soil & Ground Reinforcement

10:30 – 11:00 Coffee break

Session 5: Special Aspects

11:00 – 12:00 Risk Analysis

12:00 – 13:00 Choice of the Tunnelling Method

13:00 – 14:30 Lunch break

14:30 – 16:00 Monitoring of the surface & of the machine

16:00 – 17:00 Discussion Round table style

FRIDAY 11

Session 6: Operation and 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 break

14:30 — 15:00 Ground Improvement

15:00 — 16:00 Conventional Tunnelling

16:00 — 16:30 Questions/Answers

16:30 — 17:00 CLOSING

COURSE REGISTRATION & FEES

Participants, who interested in this training course, can register in following ways:

1. Registration via VietNam Tunnelling Association website: www.itavietnam.org
2. Registration via email: info@itavietnam.org
3. Registration via phone: +84-94 95 95 760

REGISTRATION FEE

\$100 (Bank Transfer¹)

This fee includes the study materials, proceedings & tea breaks during the course.

THE DEADLINE OF REGISTRATION & PAYMENT

25th March 2014

¹Please refer to VTA website itavietnam.org for further information

ORGANISING COMMITTEE

Prof. Dr. NGUYEN Quang Phich, *President of VTA*

Ass Prof. Dr. LUU Duc Hai, *Vice President of VTA*

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Dr. TRAN Huu Ha, *Deputy Head of Science - Technology & Environment Department, Ministry of Construction*

Dr. PHAM Quang Hung, *Deputy Head of International Cooperation Department, Ministry of Education & Training*

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