



ASSOCIATION
INTERNATIONALE DES TUNNELS
ET DE L'ESPACE SOUTERRAIN

AITES

ITA

INTERNATIONAL TUNNELLING
AND UNDERGROUND SPACE
ASSOCIATION

Special Consultative Status with the United Nations Economic and Social Council since 1987

Thirty-Fifth Annual Meeting – Budapest 2009

Press Release

The International Tunnelling and Underground Space Association held its thirty-fifth meeting in Budapest, Hungary, from 23 to 28 May, in conjunction with the World Tunnel Congress 2009 "Safe Tunnelling for the City and for the Environment" organised by ITA and the Hungarian Tunnelling Association. 1100 persons participated to the Congress. 40 of the 55 Member Nations participated or were represented in the General Assembly, including 1 proxy and 1 vote by correspondence.

MEMBER NATIONS PRESENT OR REPRESENTED

South Africa, Germany, Australia, Austria, Belgium, Brazil, Canada, China, Republic of Korea, Croatia, Denmark, Egypt, Spain, United States of America, Finland, France, Greece, Hungary, India, Iran, Italy, Japan, Lao, Malaysia, Morocco, Norway, The Netherlands, Poland, Portugal, Romania, United Kingdom, Russia, Singapore, Slovakia, Slovenia, Sweden, Switzerland, Czech Republic, Thailand, Turkey.

MEMBER NATIONS NOT PRESENT

Algeria, Saudi Arabia, Bulgaria, Chile, Colombia, Indonesia, Iceland, Israel, Kazakhstan, Lesotho, Mexico, Peru, Ukraine, Venezuela, Vietnam.

EXECUTIVE COUNCIL

Members

M. Knights	United Kingdom	President	Until 2010
H. Parker	USA	Past President	Until 2010
P. Grasso	Italy	Vice-President	Until 2010
E. Grov	Norway	Vice-President	Until 2010
Y. Leblais	France	Vice-President	Until 2010
I.-M. Lee	Korea	Vice-President	Until 2010
S. Eskesen	Denmark		Until 2010
K. Fukumoto	Japan		Until 2010
I. Hrdina	Czech Republic		Until 2010
M. Thewes	Germany		Until 2010
V. Umnov	Russia		Until 2010
B. Yun	China		Until 2011
D. Brox	Canada	WTC 2010	Until 2010
F. Vuilleumier	Switzerland	Treasurer	Until 2010
C. Bérenguier		Secretary General	Until 2011

Experts

S. Calinescu	Romania	Internal Auditor	Until 2009
P. Saarka	Finland	WTC 2011	Until 2011

MEMBERSHIP

The Association has registered the membership of a new Member Nation, Lao, and 14 new Affiliate Members (10 Corporate Members and 4 Individual Members); the total results to 55 Member Nations and 273 Affiliate Members (151 Corporate Members and 122 Individual Members) taking into account some resignations.

MAIN DECISIONS

- Creation of the "Muir Wood Lecture" which will take place once a year during ITA WTCs.
- ITA will become a founder of the Foundation on Education and Training for Tunnelling and Underground Space Use.

COMMUNICATION

- **Tribune:** In 2009, the annual issue with focus on Hungary including the reports of 30 Member Nations, reports of ITA Prime sponsors and supporters has been published in May and sent to members as well as distributed to the participants to the WTC 2009 in Budapest.
- **ita@news:** In 2008/2009, 4 issues of the *ita@news* have been sent. The *ita@news* contents news from the association, the WGs, the Member Nations, the forthcoming events, the sister associations, The *ita@news* is sent to 7'700 addresses and to the Member Nations and Affiliate Members.
- **Tunnelling and Underground Space Technology (TUST):** ITA Members have access an electronic version of TUST (including archives). This subscription is paid by ITA.
- **Website:** The web site contains around 1 000 html pages and 1 000 pdf documents representing around 12 000 printable pages. The number of distinct visitors is around 5 000 per month. The average time of a visit is over 5 minutes.
- **ITA – Reports:** Reports from ITA Working Groups are now published by ITA under "ITA Reports". Two reports have been published : "Guidelines for good occupational health & safety practice in tunnel construction" prepared by WG5 and "General report on conventional tunnelling" by WG19.

ITA OPEN SESSION ON PLANNING OF MODERN TUNNEL PROJECTS WITH EMPHASIS ON URBAN AREAS

The Open Session was introduced by Piergiorgio Grasso and coordinated by P. Grasso and E. Grov. During the Open Session, presentations were made by : Amanda Elioff, Animateur of WG 20 on "Modern Tunnel Planning – A U.S. Perspective"; Gusztav Klados on "The Smart project in Malaysia"; Pablo Bueno on "Madrid Metro and M30 Project"; Vähäadho Ilkka / "Underground (UG) – Master Plan of Helsinki" and Gu Xin / "Master Plan of Shenzhen (China) on Master plan for the utilisation of the Underground"; Keith Tsang on "Deep Sewage Tunnels in Hong Kong"; Harvey Parker on "A new tunnel in Seattle to replace the aging and earthquake-damaged viaduct along the waterfront". The proper planning and stakeholders consensus are playing a key role in the success of underground projects. The underground solution is often the optimum solution for satisfying the demands of human mobility, infrastructures, utility connection and enhanced wellbeing, but it is a limited resource and should be exploited with vision, sustainable cost/effective and adequately supported solutions. This is the effective message communicated by the different experiences and projects, often incorporating innovative technical solutions, presented and debated in the session.

TRAINING COURSE "RISK DURING CONSTRUCTION OF URBAN TUNNELS IN SOFT GROUND"

Coordinated by M. Thewes, member of ITA Executive Council, A. Assis, President of ITA-CET and D. Peila, Animator of ITA/AITES WG18 "Training".

About 100 participants attended to the training course. 17 lectures were presented or co-presented by 24 lecturers from 10 countries. 9 lectures were contributed from various ITA Prime Sponsors, other lectures were prepared by distinguished Hungarian engineers, by ITA animateurs or by members of the ITA executive council. The high class lecturers during two days gave a total of 12 hours of excellent presentations about conventional and mechanized tunnelling for tunnels in soft ground in urban areas. The lectures covered both the theoretical point of view and practical experience with relevant case histories. Engaged and lively discussions showed the high interest of the participants, to whom certificates of participation were handed out at the end of the course.

NEXT ANNUAL MEETINGS

- Vancouver, Canada, from 15 to 20 May, 2010, during the ITA-AITES WTC 2010 "Tunnel vision towards 2020"
- Helsinki, Finland, from 21 to 26 May, 2011, during the ITA-AITES WTC 2011 "Underground spaces in the service of a sustainable society"
- Bangkok, Thailand, from 18 to 23 May, 2012, during the ITA-AITES WTC 2012 "Tunnelling and Underground Space for a global Society"

WORKING GROUPS AND COMMITTEES

ITA-COSUF Committee on Operational Safety of underground Facilities

Chairman: F. Amberg (ITA); Vice Chairman: D. Lacroix (PIARC); Tutor: C. Bérenguier (ITA)

ITA COSUF is very active. Its General Assembly will be held in Budapest on 28 May 2009 with a Workshop.

ITA-CET – Committee on Education and Training

Chairman: A. Assis; Vice Chairman: D. Peila; Tutor: C. Bérenguier

ITA-CET held two meetings after Agra: one in Frankfurt (December 2008) and the other one here in Budapest on the occasion of the ITA WTC 2009. In both meetings, the education and training actions of the Association have been discussed, as well the evolution of the creation of a foundation to run administratively and financially these actions. ITA-CET has endorsed four professional master courses on tunneling engineering and has eight short-courses (15 h) under preparation on themes connected with the ITA Working Groups. Presently, ITA-CET has 40 members, from 24 different countries.

ITACUS – Committee on Underground Space

Chairman: Han Admiraal; Vice Chairman: Ray Sterling (Member of ACUUS); Tutor: Harvey Parker (ExCo)

The ITA Committee on Underground Space (ITACUS) met in Budapest on two days during the ITA 2009 WTC. On Monday 25 May 2009 the Steering Board met to discuss current activities and to plan ahead. The first ITACUS White Paper was also published titled 'Underground Space: Q&A'. The White Paper aims at explaining to decision makers the benefits of underground space use and attempt to raise the general awareness regarding the use of underground space. On Tuesday 26 May 2009 a successful Open Meeting was held on the subject of Underground Space Planning.

WG2: "Research"

Animateur: E. Leca (France); Vice-Animateur: Chung Sik Yoo (Korea); Tutor: S. Eskesen (Denmark)

The meetings were attended by 14 participants representing 11 member countries: Korea, Denmark, Spain, United States, Czech Republic, South Africa, Italy, China, Netherlands, United Kingdom, and Thailand. WG2 is currently working on the preparation of two reference documents which relate to the "Strategy for Site Investigations of Tunnelling Projects" and "Monitoring and Control of Conventional Tunnelling". The draft recommendation of "Monitoring and Control of Conventional Tunnelling" was reviewed during the Budapest meeting and approved by the group. It is expected that a final draft of "Strategy for Site Investigations of Tunnelling Projects" will be available for review at the Vancouver meeting in May 2009. As part of the action in the area of "Risk Management" which was initiated during the Agra meeting, a training presentation has been prepared, based on the 2004 "Guidelines for Tunnelling Practices" issued by WG2, and was used during the pre-conference training course session on May 22. Areas of future activities for WG2 have also been discussed during the Budapest meeting. An initiative on "High Performance Concrete for Durable Conventional and Segmental Tunnel Lining" has been proposed. Also discussed was the possibility of "Assessment of Pipeline Damage Associated with Tunnelling induced Settlements" as a future topic.

WG3: "Contractual Practices in Underground Construction"

Animateur: A. Dix (Australia); Vice Animateur: M. Smith (United Kingdom); Tutor: M. Knights (United Kingdom)

Work continued on the document commenced last year in Agra. Due to huge volumes of input being received over the past 8 months from the working group members it was necessary for the group to review the information and simplify before proceeding to completion. Working Group 3 embarked on the preparation of a checklist for all parties as a guidance for the objective assessment of underground construction contracts. The goal from Agra was to have the document finalised for Budapest – it is done and will be peer reviewed by WG19 before publication in a few months time. The document forms the basis of an ongoing and dynamic platform upon which contractual matters will be assessed by the ITA.

WG5: "Health & Safety in Works"

Animateur: D. Lamont (United Kingdom); Vice Animateur: M. Vogel (Switzerland); Tutor: V. Umnov (Russia)

Working Group 5 - Health and Safety in Works - met once during the ITA General Assembly in Budapest. Eight Member Nations participated in a lively and productive meeting. WG5 is on target to complete the update of the "Safety in Tunnelling" booklet by the 2010 meeting in Vancouver. This booklet continues to be available in a various languages. The "Guidelines for good occupational health and safety practice in tunnel construction" have appeared as the first document in the ITA Report series. WG5 is very close to completing guidance on the "Safe use of temporary ventilation ducting in tunnels". WG5 agreed to advise and assist ITA in the inclusion of appropriate occupational health and safety content in ITA endorsed training courses.

WG6: "Maintenance and Repair of Underground Structures"

Animateur: H. Russell (USA); Vice Animateur: R. van den Bosch (The Netherlands); Tutor: B. Yun (China)

Working Group 6 Repair and Maintenance of Underground Structures met on May 24, 2009 with representatives from 10 member nations and discussed the progress on our new document *Structural Fire Protection for Rail Tunnels*. In addition presentations were made on recent TNO research on fire protection for concrete linings and a recent tunnel fire in Norway, and emergency repair work on the Boston Subway in the USA.

WG11: "Immersed & Floating Tunnels"

Animateur: Ch. Ingerslev (USA); Vice Animateur: J. Baber (United Kingdom); Tutor: Y. Leblais (France)

The Working Group met on Sunday 24th May 2009. The meeting was attended by fourteen participants from ten countries, namely Canada, China, Denmark, France, Germany, Norway, Sweden, The Netherlands, United Kingdom and United States. Apologies were received from Finland. A second meeting was held the following day with sixteen participants (four of whom were new).

Information was exchanged on projects and developments around the world, and group activities between now and the next ITA Annual Congress were organized as follows:

- The catalogue of immersed tunnels will have new pages added.
- The catalogue of utility tunnels will be uploaded to the web site.
- Sections of the Owner's Guide prepared will be uploaded within a few weeks and the remaining sections are to be drafted.
- Some additional tasks for the working group have been identified and task leaders are to be identified.

WG12: "Sprayed Concrete Use" (new name)

Animateur: T. Celestino (Brazil); Vice Animateur: A. Ishida (Japan); Tutor: E. Grov (Norway)

The Group met twice with 28 participants from 17 Member Nations. Illustrations were received for the State of the Art Report. The new version incorporating them will be submitted to the ExCo in two months. Significant progress was reached with respect to the types of tests for the fiber reinforced sprayed concrete testing program. Presentations were made about the results of two tasks recently completed: Durability and Nozzleman certification. The glossary has already been prepared with 12 languages. Three more languages will be added and the file will be submitted to the ExCo in two months.

WG14: "Mechanization of Excavation"

Animateur: L. Babendererde (Germany); Vice Animateur: F. Amberg (Switzerland); Tutor: K. Fukumoto (Japan)

In order to promote mechanised tunnelling within the industry the WG14 has elaborated now two documents as information material for interest parties in the early stage of a project. A comparison list of advantages and disadvantages between mechanised tunnelling and the other tunnelling methods and as well a List of Challenging Projects, showing the capabilities for TBM tunnelling have been concluded and will be available on the WG web page in the next months.

WG15: "Underground Works and the Environment"

Animateur: J. K. G. Rohde (Norway); Vice Animateur: J. Y. Kaneshiro (USA); Tutor: I.-M. Lee (Korea)

The Working Group meetings were held the 24th and 25th of May 2009, attended by 9 representatives from 7 Member Nations. The meeting reviewed the final draft report on Environmental and Sustainable Reasons for going Underground which will be ready for issue in near future. The meeting had 6 presentations on muck disposal, ventilation, vibration, groundwater inflow, portal aesthetics and their effects on the environment, and confined space constraint issues, as well as extracts related to the tunnel environment from the Norwegian Road Authority's Handbook. The overall goals for the group as they relate to environmental and social impacts are to communicate the 1) environmental advantages and opportunities by going underground, 2) environmental challenges by going underground and 3) recommendations and guidelines concerning the environment when going underground. A questionnaire was prepared for circulation to the member nations addressing these goals, challenges, constraints, risks and environmentally sustainable solutions.

WG17: "Long Tunnels at Great Depth"

Animateur: G. Seingre (Switzerland); Vice Animateur: M Shimokawachi (Japan), did not attend the meeting; Tutor: P. Grasso (Italy)

The 10th meeting in Budapest was attended by 20 members from 10 different countries: China, France, Iran, Italy, Korea, Norway, Slovenia, Sweden, Switzerland and Thailand. The meeting was dedicated to the presentation of cases histories. 4 technical presentations were given. Due to the recent evolution of the safety rules in Europe, a proposal of minor changes and complements on the updated WG report was discussed and partly accepted.

WG18: "Training"

Animateur: D. Peila (Italy); **new Vice Animateur: H. Admiraal (Netherlands)**; Tutor: M. Thewes (Germany)

The meeting was attended by 10 participants coming from the following countries Belgium, Brazil, Czech Republic, France, Germany, Italy, UK, USA and The Netherlands. The discussion was focused on the relationship between WG 18 and ITA-CET and the future activities of the group itself. It was agreed that we are in a transition period and that for this reason WG18 has to mainly act as a connection between the ITA Member Nations and ITA-CET. The WG 18 main task for the future will be to identify the training needs and tools for the future. Finally WG 18 will continue to help the other working groups to develop teaching material from the documents they prepare within their activity. After the transition period it will be decided how to merge the WG 18 activities with ITA CET. Finally the group asked H. Admiraal to go on acting as the vice-animateur and he accepted.

WG19: "Conventional Tunnelling"

Animateur: H. Ehrbar (Switzerland); Vice Animateur: R. Galler (Austria); Tutor: F. Vuilleumier (Switzerland)

During the ITA World Tunnel Congress 2009 at Budapest, Hungary, the WG 19 hold one meeting with 18 delegates representing 9 nations. They could take note from the recently published general report on conventional tunnelling. The next project will be the publication guidelines on special contractual aspects of conventional tunnelling. The delegates from the United States, Austria and Switzerland gave presentations on contractual aspects of conventional tunnelling. The working group will collect basic material for the future work. Until the next meeting of WG 19 at Vancouver, Canada, a first draft for the guidelines on special contractual aspects of conventional tunnelling should be elaborated.

WG20: "Urban Problems, Underground Solutions"

Animateur: A. Elioff (USA); Vice Animateur: W. Broere (Netherlands); Vice Animateur: J. Nishi (ACUUS); Tutor: H. Parker (USA)

In Working Group 20, there were 20 attendees from 12 countries. The group has made significant progress towards its objective of creating an overview of the typical challenges of urban city planning and the solutions which are offered by the underground space. The fifth full draft of the report on urban problems, underground solutions, and key decision factors was reviewed by the group. The second focus was a review of the case study projects about ingenious underground solutions worldwide. We have 16 completed case studies and others identified for completion. Most of the completed case studies have been formatted for publication.