

**ASSOCIATION INTERNATIONALE DES TRAVAUX
EN SOUTERRAIN**

INTERNATIONAL TUNNELLING ASSOCIATION

Compte Rendu de la 32^{ème} Assemblée Générale

SEOUL

23 – 26 Avril 2006

Report of the 32nd General Assembly

SEOUL

23 – 26 April 2006

The 32nd meeting of the General Assembly of the Member Nations of ITA was held in Seoul on 23 and 26 April 2005 under the presidency of Harvey PARKER (USA), assisted by the Executive Members.

VOTING REPRESENTATIVES

SOUTH AFRICA	Anthony CROSS
ALGERIA	--
GERMANY	Alfred HAACK
SAUDI ARABIA	--
AUSTRALIA	Tony PEACH
AUSTRIA	Robert GALLER
BELGIUM	Willy DE LATHAUWER
BRAZIL	Tarcisio B. CELESTINO
BULGARIA	--
CANADA	Rick P. LOVAT
CHILE	--
CHINA	Guo SHANYUN
COLOMBIA	--
SOUTH KOREA	Jun S. LEE
CROATIA	--
DENMARK	Jørgen HOLST
EGYPT	M. ABD EL SALAM
SPAIN	Miguel FERNANDEZ-BOLLO
UNITED STATES OF AMERICA	Thomas PEYTON
FINLAND	Ilkka VÄHÄÄHO
FRANCE	Alain MERCUSOT
GREECE	Nikolaos KAZILIS
HUNGARY	Pal KOCSONYA
INDIA	Govind N. MATHUR
INDONESIA	--
IRAN	--
ICELAND	--
ISRAEL	Alex SAGY
ITALY	Daniele PEILA
JAPAN	Hiroshi KOMORI
LESOTHO	--
MALAYSIA	--
MOROCCO	--
MEXICO	--
NORWAY	Espen MOE
NEW ZEALAND	--
NETHERLANDS	Henk J. C. OUD
POLAND	Wojciech GRODECKI
PORTUGAL	Antonio PINTO DA CUNHA
ROMANIA	Sorin CALINESCU
UNITED KINGDOM	Donald LAMONT
RUSSIA	Georgy BUDNITSKIY
SINGAPORE	Chun Nam OW
SLOVAKIA	Robert TURANSKY
SLOVENIA	--
SWEDEN	Daniel MORFELDT
SWITZERLAND	Andreas HENKE
CZECH REPUBLIC	Ivan HRDINA
THAILAND	Suohatvee SUWANSAWAT
TURKEY	Zuhal ETKESEN
UKRAINE	--
VENEZUELA	--
VIETNAM	--

Sunday 23 April

1. Opening speech
2. Approval of the agenda
3. Approval of the minutes of the General Assembly 2005
4. Report of activity of the Executive Council – Comments from the Assembly
5. Approval of the new members
6. Report from the Auditor – Comments from the Assembly
7. Report of activity of the Member Nations – Comments from the Assembly
8. Communication from Sister International Organizations
9. Financial report 2005 - Comments and Approval of the Accounts
10. Preparation of the other decisions of the General Assembly on Wednesday 26 April 2006
 - 10.1 Presentation of the invitations received for the General Assembly 2009
 - 10.2 Amendments of the By-Laws
 - 10.3 Strategy of the Association

Wednesday 26 April

11. Report of the Open Session on Tuesday 25 April 2006
12. Working Groups: Reports and projects of activity
13. Appointment of the Honorary Executive Member for the General Assembly 2007
14. Appointment of the members of the Committee of Nomination
15. Appointment of the Auditor on the conformity of the actions of the Executive Council
16. Decision concerning the amendments of the Statutes and the By-laws
17. Validation of the follow-up of the studies concerning the strategy of the Association
18. Budgets: Draft budgets for 2006 and 2007
19. Preparation of the General Assemblies 2007 and 2008
20. Choice of the place of the General Assembly 2009
21. Other business
22. Closing speech

A – ASSEMBLY ON SUNDAY 23 APRIL

1 – OPENING SPEECH

1.1 Opening speech

President PARKER welcomed the delegates of the 35 Member Nations represented and the representatives of the two sister associations PIARC and ISRM; he thanked the President, In-Mo LEE and the Secretary General, Chungsik YOO of the Korean Association for the preparation of the 32nd annual meeting of ITA.

1.2 Death of Hans Peter Subra van LOHUIZEN and of Dennis LACHEL

- a) The Past Vice-President Henk OUD presented ITA's homage to its Past Vice-President:

"It is my sad duty to inform the General Assembly that on 20th of February Han Peter v. Lohuizen passed away.

Han Peter will always be remembered for being never ending enthusiasm for the ITA course. He was vice president of ITA during the eighties.

Han Peter was a well known tunnel engineer in the Netherlands. He was involved in the design and construction of the Y-tunnel and the Metro projects in Amsterdam. He became a professor at the University of Delft and was a much appreciated member of our national tunnelling association.

On behalf of the ITA, I wrote a letter of condolence to his wife Pieta and I attended the funeral service.

I would like to tell you that his wife asks us to thank you and has greatly appreciated our thoughts."

- b) The President Harvey PARKER presented ITA's homage to the former Animateur of the Working Group "Health and Safety": Dennis Lachel

Dennis Lachel passed away peacefully on February 1, 2006. He had been ill for a few years but he had been able to continue working and enjoying life. He worked up to just a few days before he passed away. He was the Dennis that we all knew and loved up to the end.

Dennis was one of ITA's strongest advocates and contributors, especially to our working groups. He was the Animateur of Working Group 5, Health and Safety in Works from 1996 to 2000 and the official representative to ITA from the USA for several years. He also worked extensively all over the world and was a true international consultant.

Dennis received a BS in Geology from Monmouth College in Illinois and an MS in Civil Engineering (Geotechnical) from the University of California, Berkeley. During his early years, Dennis was an engineering geologist for the Corps of Engineers. Subsequently he founded his firm which merged about 2 years ago into Lachel Felice & Associates. Dennis was involved in over 200 underground projects worldwide, including 10 metro systems, hydroelectric projects, NORAD expansion tunnels and chambers, deep gas storage facilities, and numerous sewer and water tunnels.

While his accomplishments are numerous, he will be remembered most for his zest for life, his generosity and his unwavering loyalty to his friends. He loved the outdoors. He left behind his beloved wife Kathy who joined him at many ITA meetings and who you can see in the photo.

We all miss Dennis greatly.

- c) The Assembly observed a minute's silence in their memory.

2 – APPROVAL OF THE AGENDA

The President presented the agenda which was approved without amendments.

3 – APPROVAL OF THE MINUTES OF THE GENERAL ASSEMBLY 2005

The minutes of the General Assembly 2004 were sent on 26 August 2005; they were approved on the condition of the addition of Hungary in the list of countries represented at the meeting of Group 20.

4 – REPORT OF ACTIVITY OF THE EXECUTIVE COUNCIL

The President reminded that the report of activity was sent to the Member Nations on 30 March (Encl. 1 and 2) and asked for the comments from the Assembly.

The Secretary General briefly reminded the main items of the report, and gave the latest news concerning the publication of TRIBUNE and the number of visits on the website, news given at the meeting Communication held on Saturday 22 April.

No particular remarks were expressed from the Representatives of the Member Nations.

5 – PROGRESS OF MEMBERSHIP IN THE ASSOCIATION

5.1. Member Nations

The Association did not register any new request for admission.

The number of Member Nations therefore remains at 53. (Encl. 3)

5.2. Affiliates

5.2.1. Requests for membership

a) Corporate Members: 10

196	General Consulting Ltd. "Istria"	Greece
197	Red Horn Engineering PTE LTD	Singapore
198	tacs gmbh	Germany
199	Rascor International Ltd.	Switzerland
200	AB Sandvik Construction Segment	Sweden
201	Dr. Horst Hejny Consulting	Germany
202	Shanghai Tunnel Engineering Co. Ltd.	China
203	STUVA	Germany
204	Lemley International	USA
205	Babendererde Ingenieure GmbH	Germany

b) Individual Members: 7

340	Mr. Winston Lewis Diaz	Peru
341	Mr. Jian Zhao	Switzerland
342	Mr. Goli Lamprini	Greece
343	Mr. Henry A. Russell	USA
344	Mr. Bob Chow	China
345	Mr. Alexander Bruce Matheson	Canada
346	Mrs. Alexandra O'Neill	Portugal

c) The voting delegates of the concerned Member Nations and the General Assembly approved these candidatures.

5.2.2. Resignations

a) Corporate Members: 2

8	Sweco VBB Viak	Sweden
146	Walter Construction Group Ltd.	Australia

b) Individual Members: 12

21	Mr. Marc Deburaux	France
56	Mr. Hans Peter Subra van Lohuizen	Netherlands
108	Mr. Yves Chillou	France
118	Mr. Alexandru Paul Takacs	Romania
125	Mr. Lars Persson	Sweden
130	Mr. Mohammad Irshad	USA
178	Mr. Jaynes Gordon	UK
217	Mrs. Therese Isaksson	Sweden
303	Mr. Jian Zhao	Singapore
304	Mr. Ashraf Hefny	Singapore
305	Mr. Bengt Niklasson	Sweden
326	Mr. Pierre Aristaghes	France

5.2.3. Exclusions

6 exclusions of Individual Affiliate Members were pronounced, for non-payment of the subscription fee for over three years:

80	Mr. Walter C. Grantz	USA
153	Mr. Bert Kriekemans	USA
248	Mr. Peter M. Douglass	USA
308	Mr. Brian Iske	USA
320	Mr. Clark R. Donkin	USA
321	Mr. Chris Mueller	USA

5.2.4. The number of Affiliate Members therefore reaches 269 (Corporate: 131– Individual: 138) (Encl. 4)

6 – REPORT OF THE AUDITOR ON THE CONFORMITY OF THE ACTIONS OF THE EXECUTIVE COUNCIL

Sorin CALINESCU presented the report of audit sent to the Member Nations on 18 April 2006.

As decided by the 2000 General Assembly, the Association decided to implement an action plan to reach the goals of the strategic scope of ITA becoming “the unquestioned leader of underground space”.

A special internal auditor was appointed in order to report to the General Assembly on the follow up of the progress made in achieving the strategic goals that were set up. In his monitoring mission, the auditor has been in permanent contact with the President and the General Secretary of the Association and was constantly kept informed about the debates of the Executive Council.

Following the internal audit report of 2005, the Executive Council approved the creation of a special “Task Force” with the aim of formulating proposals to the General Assembly on the general strategy of the Association. The Task Force is made of President Harvey Parker, Past President Andre Assis, Vice-Presidents Koichi Ono and Martin Knights, Mr. Eivind Grov, Treasurer Francois Vuilleumier and Secretary General Claude Berenguier.

The task Force held two meetings in December 2005 and February 2006 and issued its first draft report. The plan of actions set up by the Task Force is in line with the initial strategic

plan of the Association and will propose the development of further actions especially in terms of improving communication, linking with other related international organizations, creation of new Committees and consolidation of the administrative organization of the Association's secretariat. According to the draft report, a final motion may be submitted to the General Assembly for vote in 2007.

These actions provide a strong basis for the future action plan of the Association with good assertion of success.

In the meantime, the Executive Council continued its work on the already established line of actions. The members of the Executive Council had an impressive agenda of meetings with the Member Nations in the framework of visiting and participating in the events organized in Argentina, Chile, Peru, Brazil, Switzerland, Poland, UK, Czech Republic, Slovakia, France, China, Japan, Korea, Germany, Spain, Italy, Russia, Thailand, Portugal, Malaysia and USA.

The communication capabilities of the Association have been improved relying on the publications of the organization, mainly the constant improvement and updating of the website, which showed a neat increase in audience during the past year.

As previously decided, the electronic newsletter ita@news has replaced the paper published "Tribune" as permanent link and source of fresh information for the Member Nations and individual subscribers. "Tribune" has now only one issue per year, carried out on the occasion of the General Assemblies.

In terms of communication there are still some pending problems related on one hand to the interactive capabilities of the website that are not used as expected and on the other hand to the French translation of the web content.

The Executive Council is still looking upon the issue of communications with the general public and recent debates among the members of the Council addressed the relations with the media and the general press which could be one efficient channel to address to the public.

Focusing on the "Underground Worldwide" section of the website, the "Task Force" is working to develop a virtual library that will give visitors information about the relevant underground projects presented.

Special attention has been given to the relations with the Corporate Affiliate Members and the development of the category of "Prime Sponsors" and "Supporters" with notable results in the preparation of seminars such as those held in September 2005 in Poland and November 2005 in Brazil. The code of ethics that define the framework of these privileged relations is about to be finalized and has been presented to the Member Nations.

Enlarging the number of Member Nations is another direction of action that has been followed and contacts have been made with such countries as Albania, Algeria, Argentina, Azerbaijan, Belarus, Bolivia, Cuba, Georgia, Ireland, Kazakhstan, Myanmar, Serbia-Montenegro, Sri Lanka, Tajikistan and Uzbekistan in order to bring them into the organization. The President and the members of the Executive Council also took care of keeping in touch with the United Nations and the related international organizations and another Task Force restarted the contacts with the European Union.

Special attention was committed to the Young Professionals category of affiliates and the dedicated Task Force for Training, supervised by Andre Assis is working to set up a "Network of Universities" of the Association with promising results.

As one can easily see from the current report, in addressing the most important issues of the progress of the functioning of the Association, the Executive Council opted to setup dedicated "Task Forces", a method that seems to be quite effective in finding the right solutions to the current problems. If the actual results of these special Task Forces or future Committees will be substantiated by the publication of a renewed coherent strategic plan of actions, the basic

goal of “ITA becoming the unquestioned leader of underground space” will get the a real boost in the near future matching the great expectations of the Member Nations of ITA.

The President thanked Sorin CALINESCU and reported that the Executive Council will examine the recommendations presented so as to follow them up in the best possible conditions.

The General Assembly unanimously approved the report presented.

7 – REPORT OF ACTIVITY OF THE MEMBER NATIONS

The Secretary General reported that he had received so far 34 reports of activity for 2005; the 32 reports received in due time were integrated in the annual issue of TRIBUNE distributed in Seoul; he also reported that all the reports, including those that will be sent to him within the next few weeks, will be integrated in the website. He reported that the last two years saw a considerable increase of the number of Member Nations having sent their annual report, as, over two years, the received reports concerned 38 Member Nations; he reminded that the Executive Council is at the disposal of all, and in particular of the 15 Member Nations that did not send any report in the past two years, to help them develop their activity.

- a) **South Africa:** The South African representative reported that the next conference of SANCOT will be held next June; he also reported that two tunnels are in planning:
 - one 800 m long under Durban port;
 - Gautrain: the country's first underground rail system (20 km of tunnels).
- b) **Australia:** The Australian representative informed the Assembly that Australia & New Zealand have co-operated to form a new chapter to increase communication between the two countries.

The formation generated the requirement for a new association name. The name has been altered to the “Australasian Tunnelling Association (ATS)” This event was combined with the generation of a new logo to serve the two countries & better illustrate the kinship with ITA.

ATS has proactively assisted the government of N.S.W (New South Wales) to produce a “safety code of practice”.

ATS will bid to conduct the ITA congress in Melbourne, Australia during 2010.

The General Assembly validated this new organization of the Australian group.

- c) **Brazil:** The Brazilian representative informed the Assembly about the success of the promotion of an underground solution obtained by the Brazilian Association for the construction of a tunnel for replacement of the old viaduct of Sao Paulo west artery (Minhacao) and for the realization of an underground solution for the BR-116 highway for reasons of environment.
- d) **Canada:** The Canadian representative reported on the important development of underground works in Toronto (15 km of new sewage and 15 km metro extension) and in the West part (sewage in Calgary and metro in Vancouver); he reminded that the conference 2006 of TAC will take place in Vancouver next September and reported that TAC will invite ITA for the organization of WTC 2010.
- e) **Egypt:** The Egyptian representative reminded that the conference on the use of underground space in congested urban areas will be held on November 6 & 7, 2006 in Sharm-El-Sheikh and that ITA’s Executive Council will meet on this occasion. He also reported that the Egyptian Tunnelling Society has already translated ITA book for health & safety in the Arabic language and it is now in the course of printing.

- f) **United States of America:** The USA representative informed the Assembly about the new organization set up in his country as the AUAC was replaced by the UCA (Underground Construction Association) within the SME (Society of Mining Engineering). He also reported that the next conference NAT 06 will take place in Chicago in June 10 to 13 and that a regional conference is planned in Cleveland next September.

The General Assembly validated this new organization of the USA group.

- g) **India:** The Indian representative reported on the construction of 80 km of railway tunnel in the Himalayas; a local seminar on Geology in the Himalayas will be organized next June 6 to 9.
- h) **Italy:** The Italian representative reported that the 1st edition of the Master Course post graduation on Mechanized Tunnels endorsed by ITA just took place with the participation of 40% ITA participants; moreover, he reported that the metro of Turin was inaugurated last January 30, that the Castellanza Tunnel was finished just a few days ago, and that the Italian Tunnelling organization signed an agreement with an old iron mine to test and for teaching activities.
- i) **Japan:** The new President of JTA presented the Journal “Tunnelling activities in Japan 2006” and reported on the new developments of underground works in his country, as the JTA just celebrated its 30th anniversary.
- j) **Netherlands:** The Dutch representative reported that the Dutch government decided to install officially a committee on tunnel safety, that each project in the Netherlands for which construction will start after May 1st 2006 will need the advice of this committee, and that all existing tunnels have to be approved by this committee before the end of 2014.
- k) **Portugal:** The Portuguese representative reported that the Executive Council of ITA will meet in Lisbon at the very beginning of July on the occasion of the seminar that will be organised on June 29 & 30.
- l) **Romania:** The Romanian representative reported that Sorin Calinescu was just elected as the President of the Romanian Association and that the 5th national conference will be held next October 12 to 14 at SINAIA.
- m) **United Kingdom:** The representative from the United Kingdom informed the Assembly about the organization by the BTS of the training on projects of Tunnels (June 26 to 30) and on the seminar on passive protection against fire (October 6).
- n) **Sweden:** The Swedish representative reported that the start of NORRA LANKEN, the third part of the Ring Road around Stockholm, now has got the approval from the government, after 10 years of delays, and that other works are going to start in Malmo and in Stockholm.

The Government will soon propose to the parliament new regulations to be adopted to fulfil the EU standards concerning safety in road tunnels and will be in force from 1 June 2006.

- o) **Switzerland:** The President of the Swiss Tunnelling Society (FGU) reminded that the agreement to support the Secretariat will end at the end of 2006 but that the Swiss efforts will be pursued in 2007 by the membership of 2 Prime Sponsors, and the FGU will become a Supporter of ITA. He reminded that the annual conference AlpTransit will take place in 2006 in Lucerne (22 and 23 June).

8 – COMMUNICATIONS FROM GUEST SISTER INTERNATIONAL ORGANIZATIONS

a) World Road Association (PIARC)

On behalf of the World Road Association (PIARC), Willy De LATHAUWER presented the situation of the works of the Committee of Operation of Road Tunnels, and of its relations with ITA.

The Secretary General added that ITA will be associated with the preparation of the special session that will be organised during the congress 2007 of PIARC on the topic of Risk Management in Tunnel.

The Committee of Operation of Road Tunnels is preparing for this Congress two specific sessions, that is to say:

- “Activities of the Committee of Operation of Road Tunnels”
- “Risk Management in road tunnels” (in collaboration with ITA)

For the present cycle, the following 5 working groups were selected:

- WG 1: Operation of Tunnels
- WG 2: Safety Management (including the problem of hazardous materials)
- WG 3: Human Factors in Safety
- WG 4: Detection, Communication, Safety Equipments
- WG 6: Ventilation and Control of Fire

These groups are preparing 16 reports, among which 13 could be published before the Congress in Paris:

- WG 1: “Guide for the recruitment, training, and organization of operation staff in road tunnels”
- WG 1: “Recommendations to the managers of high traffic urban road tunnels”
- WG 2: “Integrated approach of safety in road tunnels”
- WG 2: “Risk Analyses in road tunnels”
- WG 2: “Tool for the management of safety in road tunnels”
- WG 3: “Human Factors and safety in road tunnels”
- WG 3: “Guide for rescue teams in road tunnels”
- WG 4: “Direction Signs in road tunnels”
- WG 4: “Visual and hearing means to promote safety in road tunnels”
- WG 4: “Garages and safety points in road tunnels”
- WG 6: “Guide to optimize air quality in the environment of road tunnel”
- WG 6: “Guide to manage pollution in road tunnels”
- WG 6: “Evaluation of the fixed systems of struggle against fire in road tunnels”; this report also includes the contribution that may be given by the structure of the work in this field: its Animateur is Alfred HAACK, which automatically follows up the long-standing link toward WG 6 of ITA.

Three other reports are planned for after the Congress:

- WG 4: “Video Detection in road tunnels: advantages and limits”
- WG 6: “Strategies of operation of ventilation in road tunnel”
- WG 4: “Design fires for road tunnels”

Finally, the Committee is also preparing an article in one of its next issues of the Journal “Routes-Roads” of the Association, devoted to the “Impact of road surface material on fire in tunnels”.

PIARC had already published issue 324 of its Journal, dealing with the safety of all types of transport tunnels, and which was drafted jointly between the two Associations.

The Committee keeps going in the field of seminars in developing or transition countries: the one in San Juan, Argentina, has just ended with success, and the following one will be held in Chongqing, China, in October.

The agreement between PIARC and ITA on the distribution of tasks notably in terms of safety in road tunnels was signed; the first annual meeting was held this year and notably specified the various levels of cooperation.

b) International Society for Rock Mechanics (ISRM)

Jian ZHAO, the Vice-President for Asia of ISRM, brought the greeting from the President of ISRM; he reported that ISRM feels very strongly in favour to maintain and to strengthen the link with ITA. There are plans for the two associations to meet in the next two months, to discuss possible actions of cooperation, for examples, joint working groups, in areas where the two associations have common interests.

9 – FINANCIAL REPORT 2005

9.1. Closing of the Accounts 2005 - Report of the Auditor

- a) The financial elements were sent to the Member Nations along with the notice for the General Assembly. (Encl. 5)
- b) The Treasurer and the Secretary General commented the documents sent to the Member Nations, which include the balance sheet, the account of results, and the report of the Auditor. They also reported that, in an appendix, the Auditor recommends to set up a clear policy on the follow-up of unpaid subscriptions (reminders, sanctions and exclusion); it was reminded that ITA's policy is to proceed to two reminders in the year and to exclude the Affiliate Members who have not paid their subscription fees for 3 years; in this respect, it will be advisable to consider to apply chapter III of the By-laws concerning the exclusion from the voting right at the General Assembly for the Member Nations that won't have paid the subscription for the corresponding year at the date of the General Assembly (10 this year).

9.2. Approval of the accounts

The Dutch representative regretted that the Working Groups would not use the financial possibilities offered in the budget, and proposed to reduce them if this carries on in the next few years.

The General Assembly unanimously gave their quitus to the Executive Council and to the Secretary General for the financial situation and the management for 2005.

10 – PREPARATION OF THE OTHER DECISIONS OF THE GENERAL ASSEMBLY ON WEDNESDAY 26 APRIL

10.1 Presentation of the invitations received for the General Assembly 2009

Two candidatures were received in due time from Hungary and from the United Kingdom.

The representatives from the concerned countries presented the candidature of their country for the organization of the annual meeting and of the General Assembly 2009.

The corresponding decision will be made at the Assembly on Wednesday 26 April.

10.2 Amendment of the Statutes and of the By-laws.

The file was sent along with the notice sent on 22 February (Encl. 6).

These amendments mainly concern the creation of the “Committees”, the addition of the notion of “operation” in the aims of the Association, and the clarification of the membership conditions to the category of Individual Affiliate Members.

The corresponding decision will be made at the General Assembly on Wednesday 26 April.

The Belgian representative asked for clarification on the role of Member Nations in the appointment of the members of the Committees; the Secretary General reported that it will be the same as its present role to appoint the Corporate Affiliate Members.

In reply to a remark made by the Dutch representative, it was reminded that the decision to create Committees is made, as for the Working Groups, by the General Assembly.

10.3 Strategy of the Association

The file was sent along with the notice sent on 22 February (Encl. 7).

The General Assembly on Wednesday 26 April will have to validate the studies in progress at the level of the Executive Council.

The corresponding decision will be made at the General Assembly on Wednesday 26 April.

Closing Speech to GA on Sunday by Harvey Parker

Please allow me a few remarks to help establish our future direction as we move into the next few days and year. First of all, the conference theme is “Safety in Underground Space” and our Open Session’s theme is “Managing Risks in Tunnelling”. Clearly safety and risk management are highly important goals. Last year I asked all of the Working Groups to address how they can help in risk management and I am asking that each of the working groups and Member Nations do everything possible to help our industry in reducing accidents and improving safety.

Second, we need to make owners, decision makers, the media, and the public in general more aware of the benefits of the underground. Please go out of your way to make them aware and to help them consider the underground as an alternative to all their projects.

Third, please give training a high priority. To achieve the needed high rate of tunnel construction without increasing risk and compromising safety will require many things but certainly a dramatic increase in training at all levels.

Finally I wish to emphasize the Membership Drive we are embarking on. We need to dramatically increase our membership at all levels. So as you go about your business, please do what you can to help us increase our membership.

Again, I thank you for such a successful meeting this morning. We will see you again on Wednesday morning for the second part of this General Assembly. This meeting is adjourned.

B - ASSEMBLY ON WEDNESDAY 26 AVRIL

11 – REPORT ON THE OPEN SESSION HELD ON TUESDAY 25 APRIL

Martin KNIGHTS presented the report of the Open Session.

In the past 10 years or so there have been number of well publicised tunnel construction failures. There has in many cases been a lack of proactive management of the risks cuffing the project. Proactive management means constantly assessing the risk to tunnel projects during the planning, design and construction phases and implementing prior plans for mitigation, reduction and removal of the risks before they occur. The publicity and consequential effects mean that the public, funders, regulators and insurers will have reduced confidence in our industry. This is a matter of concern to ITA.

In recognition of these events ITA set up and has recently published guidance reports on managing risk during the planning, design and construction phases of a tunnelling project dealing with technical, safety and contractual matters. Working Groups 2, 3 and 5 have been proactive in this respect. We heard at the Open Session from the speakers representing these 3 WGs and they pointed out key issues and developments in dealing with Risk Management of Tunnel Project.

In parallel with the ITA initiatives the International Insurers (ITIG) have developed a new Code Framework that seeks to facilitate and ensure the use of formal Risk Management techniques on tunnel projects. They seek to make it a condition that Insurances will only be given to a tunnel projects providing that the Insurer is satisfied—through regular audits—that Risk Management principles are being applied by all parties—client, designer and Contractor. The speaker from ITIG explained the recent requirements. In addition the British Tunnelling Society recently co authored a Code of Practise that promotes the use of recognised Risk Management techniques for tunnel projects. The recent ITIG Code/ Framework is based on that document which was published in 2003.

We also heard from a prominent Korean speaker who provided a regional perspective of risk manager on tunnel projects. It is hoped the Open Session helped delegate understand how ITA can provide guidance on Risk Management, Quality, Management and Safe Management of Tunnel Projects. The Korean and International delegates found the Open Session helpful and ITA acknowledges the good working relationship with the International Insurers.

The 5 speakers gave excellent lectures, excellent powerpoint illustrations and there was a good debate and questions from the delegates.

If you did not attend you missed 3 1/2hours of how ITA can organise and inform delegates of important issue that affects our industry.

I wish to thank the ITA and ITIG speakers and the Korean Tunnelling Association for their participation.

12 – WORKING GROUPS AND COMMITTEES: REPORT AND PROJECT OF ACTIVITY

12.1. – COSUF: Animateur: Alfred HAACK (Germany), Vice-Animateur: Didier LACROIX (France), Tutor: Claude BERENGUIER – Report presented by the Animateur:

ITA Committee on Operational Safety of underground Facilities was installed by the ITA General Assembly 2005 in Istanbul. The initiative was started from the consortia of 8 European Research project launched during the last 5 years dealing with safety matters in traffic tunnels. The Committee is open for all interested in the field of safety and security worldwide. Invited for membership are companies and all the stakeholders like clients, operations, designers, contractor, supplier, educational institution and so like. Membership fee will be staggered in two levels.

- a) Governmental and public institution as well as educational bodies
- b) All others

An inaugural symposium is planned in close cooperation with the two European research projects UPTUN and Safe T in Lausanne Switzerland on 30th~31st May, 2006.

The session themes are:

- experience from and for practice
- safety management
- response management
- design and equipment for safe tunnels
- need for the future starting from the EU-projects

They are followed by a round table discussion on future needs of research and development. In this context the Committee intends to focus on the following three items in the forthcoming years:

- a) Standards and regulations for best practice
- b) Interaction with European and international activities
- c) Research and development

All directed to safety and security in connection with using tunnels and other underground facilities. For more details about COSUF and the symposium please visit the ITA webpage : www.ita-aites.org

12.2. – WG 2 – Research: Animateur: Eric LECA (France), Vice-Animateur: Yoshihiro TAKANO (Japan), Tutor: Harald WAGNER (Austria) - Report presented by J. RICHARDS:

The Group met on Sunday April 23 and Monday April 24. These meetings were attended by 16 participants representing 12 member countries: Austria, China, Korea, Denmark, Spain, the United States, France, Italy, the Netherlands, the United Kingdom, Singapore and the Czech Republic.

The meetings included a progress review of the program agreed at the 2005 Istanbul meeting, as well as a discussion on future actions to be undertaken.

Since the Istanbul meeting, the recommendation on “Settlement Induced by Tunnelling in Soft Ground” has been finalized following the review performed by the referees designated by the Executive Committee and is now ready for publication.

Most of the activity over the past year has been dedicated to the preparation of two recommendations, on “Strategy for site investigations of tunnelling projects”, on the one hand, and on “Monitoring & Control of Underground Works”, on the other hand, as well as participating in the works of the ITA task force on “Risk Management”.

The two draft recommendations were reviewed during the first meeting, and a new set of actions agreed for finalizing the documents prior to the Prague meeting. The two recommendations are meant to provide high level strategic information, and to reflect on the practices of member countries.

The discussion on future works identified “Risk Management” as one key area of activity for the coming years. Three potential areas of activities were defined:

- actions aimed at facilitating the dissemination of risk management practices; this may include developing educational material for training;
- actions aimed at building a data base providing evidence of the benefits of risk management, based on a review of case histories of projects where the method was successfully implemented;
- follow-up document to the 2004 “Guidelines for Tunneling Risk Assessment” issued by WG2.

This new document would be aimed at assisting in bringing the Risk Management approach described in the Guidelines into practice, and elaborate on how it could be used as a decision making tool, for managing both risks and opportunities and improving the overall quality of the works. The impact of various delivery models (conventional, Design & Construct, Concessions and other forms of Public Private Partnerships) - and associated contractual arrangements - was identified as one other area of potential further investigation, in comparison to the 2004 document.

It was also recognized that this work would need to be coordinated with other working groups involved in risk management within ITA, WG3 on “Contractual Practices” and WG5, on “Health and Safety in Works”.

12.3. – WG 3 – Contractual Practices: Animateur: Arnold DIX (Australia), Vice-Animateur: Martin SMITH (Switzerland), Tutor: Yücel ERDEM (Turkey) - Report presented by the Animateur:

Working Group 3 met on both Sunday and Monday and have throughout the year met in London and exchanged numerous emails and telephone calls over the past year.

Members from the UK, the Czech Republic, Australia, Turkey, Egypt, Switzerland and Germany attended the meetings here in Seoul.

Working Group 3 have continued in their task of producing a set of globally applicable contractual objectives designed to encapsulate the combined experience of ITA member nations on the risks of underground construction independently of the legal jurisdiction in which a project is delivered.

The full review of all ITA’s existing contractual practices propositions has now been completed.

It was apparent that a number of these key propositions are outdated and were formulated in a manner which is unnecessarily prescriptive and did not describe the essence of the contractual objective to be achieved.

After much discussion it was agreed that what was missing was a framework to ensure that the formulation of future propositions were in areas not already covered to ensure valuable guidance was given to members of the ITA.

An overarching “framework” has now been formulated that focuses upon the ITA principles from which our work will now continue.

Concern was raised within the meeting of the lack of coordination between the working groups and the material that was being produced seemingly independently. We look forward to the Executive finding a way in which to manage this issue.

Mission Statement

To provide a unified framework that can be applied internationally on all underground projects which articulates the special issues to be considered and provides guidance on where more specific information can be obtained.

Training

The propositions of Working Group 3 have been provided to the training section and are available on the website. Further work to include the “framework” diagrams will be added over the coming weeks.

Frequency of Meetings within Working Groups

This matter was discussed and it was agreed that it was not possible to increase the frequency of meetings due to financial constraints and the fact that we are all volunteers and give the time that we do to ITA without financial reward.

The group members do contact each other in the event of being in the other’s country. The group corresponds throughout the year by email to continue the production of their work.

12.4. – WG 5 – Health and Safety: Animateur: Donald LAMONT (United Kingdom), Vice-Animateur: Walter CHROMY (Germany), Tutor: Mikhail BELENKIY (Russia) – Report presented by the Animateur:

Working Group 5, “Health and Safety in Works”, met once during the 2006 ITA General Assembly in Seoul. Donald Lamont, from the UK, was Animateur with Walter Chromy, from Germany as vice-Animateur. Unfortunately the vice-Animateur was unable to attend because of family illness. Mikhail Belenkiy, from Russia was the ITA Tutor.

Although thirteen delegates from nine countries were present this year – Canada, China, the Czech Republic, Germany, Korea, Norway, Russia, the USA, the UK, for most of those present it was their first WG5 meeting. Two regular working group members representing Sweden and Switzerland sent apologies for absence. The Working Group reviewed the progress which had been achieved on a number of projects over the past year.

ITA Booklet - Safety in Tunnelling

I am very pleased to report that to date there have been translations of the booklet into Arabic, German, Czech/Slovak and Russian. I can also report that in addition to the English language text, separate versions of the German-language text have already been printed for use in Austria, Switzerland and Germany. I would again ask any Member Nation which wishes to translate the document into their own language to contact me and on completion of the translation, to send a copy to me and to the Secretariat.

Our Tutor reported that he had recently met satisfied users of the booklet in Siberia whilst a member of the group reported that users of it in the USA were impressed by its contents.

Database of Health and Safety Authorities and Legislation

The database currently contains details for 40 countries. It had been hoped this year to get approval from the Working Group that the database file could be passed to the ITA for posting on the website. However the lack of continuity in the membership meant that those attending for the first time in Korea had not had the opportunity to study the database content prior to the working group meeting. Accordingly it is now hoped to achieve agreement by e-mail after which the database will be given to the Secretariat for inclusion on the ITA website.

Guidelines for Good Occupational Health and Safety Practice in Tunnelling

Following extensive discussions in Istanbul, parts of this document were rewritten. Whilst it had been hoped to get confirmation from the Working Group that the text of the Guidelines could be passed to the ITA for publication, the lack of continuity in group membership again meant that most of those attending had not had the opportunity to study the document prior to the working group meeting. Accordingly it is now hoped to achieve agreement by e-mail in the coming months after which the document should be available to be put on the ITA website.

Future work items

Last year WG 5 considered a paper from the vice-Animateur on workplace incident concepts, an appendix to which related to the use of rescue containers and blast shelters. The paper was the outcome of cooperation between tunnelling organisations in Germany, Austria and Switzerland. In the absence of the vice-Animateur, an update on the development of the paper was given by Prof Haack. However WG 5 members considered there was a need to develop the appendix on rescue containers and blast shelters as a stand-alone document in response to their increasing use in tunnels. They suggested this should be done by WG5 under the auspices of the ITA.

Training courses

WG5 welcomes the involvement of ITA in the provision of training. However we are concerned to ensure that the management of occupational health and safety risk is adequately covered in future courses. WG 5 is willing to assist in advising member nations on this matter.

Position of Animateur

On a personal note, I have now served five years as Animateur of WG5 which according to ITA Bylaw 6.8 is the maximum period of tenure. However the members of the working group confirmed their agreement that I should continue in post.

12.5. – WG 6 – Maintenance and Repair: Animateur: Henry A. RUSSELL (USA), Vice-Animateur: Rene van den BOSCH (Netherlands), Tutor: Weining LIU (China) – Report presented by the Animateur:

The Working Group met on Sunday 23 April, and Monday 24 April 2006. The meetings were attended by 21 representatives from 14 member nations, they were: Czech Republic, China, Finland, Germany, Japan, Netherlands, Norway, Portugal, Republic of Korea, South Africa, Sweden, Switzerland, United Kingdom and the United States of America.

The Working Group completed the draft of a new work on the development of *Guidelines for Structural Fire Resistance for Metro Tunnels*. This document is an adaptation of our recent work on *Guidelines for Structural Fire Resistance for Road Tunnels* which is on the ITA web site. This new work required the inclusion of specific elements unique to a metro system and the development of new time / temperature curves for heat release from fires in a metro

system. The Working Group believes that this is an important document to develop since there is very little information available on the subject. The Working Group anticipates submitting a draft of the document to the Executive Council for review later this year.

Three excellent presentations were made to the Group, Mr. Park of the Republic of Korea who provided a presentation on the Daegu station fire in Korea. Mr. Gjaeringen of Norway provided a report on the FloyJell tunnel fire in Norway. The Animateur presented a technical discussion on the comparison of various materials for fireproofing structures.

In addition to the work on our newest document the Working Group provided to Mr. Tarcisio Barreto Celestino the Animateur of Working Group 12, over 100 photographs of the application of shotcrete on tunnel projects within the USA.

As requested by the Executive Council in the Communications meeting the Working Group has developed a Mission Statement as follows:

The mission of the Working Group is to provide support to the International Tunnelling Association in regard the inspection, maintenance, repair, and protection of underground structures. The Working Group shall be responsible of reviewing state-of-the art methods for the inspection, repair, maintenance, and protection of structures and any other directive requested by the Executive Council of ITA. The Working Group shall develop Guidelines or other suitable documentation of its work for inclusion in the ITA Library and for posting on the ITA website. This mission statement may change from time to time, based upon the requests of the Executive Council.

The Group wishes to invite any members of the Association who would like to participate in the development of our work to contact the Working Group members or myself.

12.6. – WG 11 – Immersed and Floating Tunnels: Animateur: Christian INGERSLEV (USA), Vice-Animateur: Jonathan BABER (United Kingdom), Tutor: Yann LEBLAIS (France) – Report presented by the Animateur:

The Working Group met on Sunday 23rd April 2006. The meeting was attended by 12 participants from nine countries, namely Denmark, Finland, France, Japan, Netherlands, Norway, Sweden, United Kingdom and United States. A second meeting was held the following day with 14 participants including one from China. To better represent immersed tunnel knowledge world-wide, the Working Group would like to recruit members from unrepresented countries such as China, India, Korea, Mexico and Russia as well as new younger members. The Animateur is Christian Ingerslev, the vice-Animateur is Jon Baber and the Tutor is Yann Leblais.

At the meetings, a report was made of the past year's activities, a work plan was established for the coming year, information was exchanged on new projects and developments around the world, and the working group discussed the ITA website. It was agreed that the mission of the Working Group is to share and distribute knowledge of immersed and floating tunnels with the community; participants were concerned that existing expertise might otherwise be lost. To do this, as identified in last year's report, the working group is going ahead with its plans to establish a searchable database on the ITA website in order to update its earlier State-of-the Art reports as well as to include the contents of those reports. A number of the participants volunteered to contribute in-depth material to the database on some of the identified topics. Use by the Working Group of the ITA Forum was discussed, and it is proposed to use it again.

Presentations were given on the Naha City, Busan-Keoji, Bjørvika and Bosphorus tunnels, and on future ideas for floating tunnels. It was also agreed that this Working Group is the right place to pursue future ideas about the use of floating immersed tunnels to traverse larger expanses of water; a potential crossing will be identified for which there is a need and where other forms of tunnelling are not possible so that concepts can be taken further, such as crossing active faults.

After a framework is identified for the on-line information, time will be required from the Webmaster and others to place the Working Group's information on the ITA website and to insert identified links. It is requested that some budget be made available for this purpose so that the Working Group might start to achieve its aims.

12.7. – WG 12 – Shotcrete: Animateur: Tarcisio CELESTINO (Brazil), Vice-Animateur: Atsumu ISHIDA (Japan), Tutor: Eivind GROV (Norway) – Report presented by the Animateur:

The WG12 on “Shotcrete Use” met in Seoul on Sunday 23rd April. A total of 22 participants from 13 countries, namely Norway, Sweden, Switzerland, France, Czech Republic, Luxembourg, Singapore, Korea, Israel, Italy, Germany, Japan and Brazil attended the meeting. The meeting was conducted with discussions of (1) ongoing activities, (2) new activities, and (3) other subjects.

a) Ongoing activities

State of the Art Report: the group completed the report by rearranging the text and including a presentation of the report and submitted to the Executive Council. Minor corrections were advised by the Executive Council and decision was made to finish this task as soon as possible by complying with the requirements.

Evaluation on fiber-reinforced shotcrete: the first part of the test program is already underway, started at Hagerbach test gallery in Switzerland in March, where shotcrete was sprayed with three different types of fibers. The second phase of the test program will start also at Hagerbach during the last week of May.

Sprayable mortars for fire protection: the compilation of information was completed and a table was presented allowing comparison of performance of different mortars. The group brought information about new materials which will also be included before it is released in upcoming conference on Fire Protection in London next October.

Standards on nozzlemen certification: the preliminary report based on information sent by France, Norway, and Brazil was presented. The report will be sent to all Member Nations to be completed by including new information from other countries.

Collection of nozzlemen photos: several photos of nozzlemen, which were sent to the group by Henry Russell, who the Group wants to acknowledge, were shown. The members were encouraged to continue collecting similar photos and upload them to the Group Forum.

b) New activities

Accidents related to shotcrete: in response to the request from the Executive Council, the Group decided to collect information on case histories of accidents related to the use of shotcrete in tunnel constructions. This includes both accidents related to some deleterious consequence of chemical additives to the workers and excavation instability due to the lack of appropriate properties of shotcrete. A questionnaire will be prepared and sent to the National Groups.

Suggested methods for panel test preparation: the current standards available for testing panels do not properly cover specimen preparation. As this deficiency is responsible for scattering of results, and can be improved by proper standardization of specimen preparation procedures, the Group decided to prepare suggested methods for specimen preparation. The information will also be collected on problems arising from the adoption of current procedures.

Fire protection for shotcrete: in addition to the report on sprayable mortars for fire protection, the Group decided to collect information on fibers and other elements to be added to the shotcrete matrix.

c) Other subjects

Exchange of information with WG16: the Group decided to exchange information with the Working Group 16 on “Quality”.

Additional meetings: in order to improve the dynamics of the Group, it was decided to increase the number of meetings. Opportunities like the forthcoming conference of Shotcrete for Underground Support X to be held in Canada next September will be taken for extra group meetings between ITA congresses.

12.8. – WG 14 – Mechanization: Animateur: Katsuji FUKUMOTO (Japan), Vice-Animateur: Felix AMBERG (Switzerland), Tutor: Koichi Ono (Japan) - Report presented by the Tutor:

a) WG activities to year 2004

- “Classification and definition of TBMs with recommended keywords” has been sent to Executive Counsel Members for reread.
- Information of standards and manuals in mechanized tunnelling has been gathered to issue the reference book.
- Format for “Challenging Mechanized Tunnelling Projects” was developed and 26 projects (1 in Japan, 3 in Europe, 5 in China, 17 in Korea) have been reported.

b) WG activities in Seoul 2006

The WG-14 met on April 23. We had twelve participants from ten member nations, Australia, Canada, Czech Republic, China, Germany, Japan, Korea, Norway, Singapore and Switzerland.

The following items were discussed and agreed in the meeting.

- TBM Glossary in Spanish and Korean will be completed by the next WTC.
- Check the status of “Classification and definition of TBMs with recommended” keywords” to put on the ITA website.
- Modifications for “Challenging Mechanized Tunnel Projects” format are discussed. As no response from person in charge of North and South America, Mr. Lovat will take responsibility in those areas. Request for information of “Challenging Mechanized Tunnelling Projects” will be sent to member nations through Secretariat. First issue of “Challenging Mechanized Tunnel Projects” is aiming in September.
- The next task of WG Vision 2020 is discussed and it is decided to work on Client’s needs and Contractor’s needs in Mechanized Tunnelling. Three topics :
 1. Training course, promotion activities for young engineers and workers
 2. Benefits of mechanized tunnelling against other methods
 3. Risk management and insurancesare identified to be emphasized on the list and comments will be added and send to the Animateur by the end of June.

12.9. – WG 15 – Environment: Animateur: Jan RHODE (Norway), new Vice-Animateur: Jon KANESHIRO (USA), Tutor: Harvey PARKER (USA) - Report presented by G. OTA:

The Working Group met on two occasions and was attended by eight representatives from six Member Nations – China, Japan, Norway, Czech Republic, Russia, and United States of America.

The pre-final report on "Environmental and Sustainable Development Reasons for Going Underground" assembled with all pictures was circulated to all members of the WG by Rodney Craig just prior the meeting. The report was based on a survey Questionnaire A, Projects which have been placed underground for Environmental and/or Sustainable Development Reasons. Only very minor edits are required and photos need to be properly referenced because of concerns for copyright issues before forwarding to the Executive Council. The photos were selected to avoid this problem, but a final check will be done by assembling the references. The publication format of WG 15's new document was suggested to include the following options: (1) a successor to "Why Go Underground?" which is out-of-print, (2) on the web, (3) in TUST in black in white, (4) in the Tribune, or (5) be published in the ITA 2007 Prague Proceedings. If made in TUST or in the ITA proceedings, the photos and figures will have to be checked for quality in black and white format.

The meeting heard presentations, from Japan, Russia, and Norway on how the impacts of tunnel projects during construction and operation have affected the environment in beneficial ways or where mitigation measures were implemented to minimize impacts during construction. In particular, Japan presented impacts and controversy of ventilation tower for a road tunnel, United Nations University (UNU, Russia) on UN study on benefits of underground facilities in urban areas, and Norway presented on mitigation of tunnel construction impacts for highway tunnel construction.

The need for underground works to reduce Man's impact on the environment and to maintain sustainability of the environment was discussed. The need for quantifiable measures of how underground structures save energy, biomass used, fuel consumption, reduced greenhouse gasses, etc. Planners and decision makers need to be made aware of the benefits of using the underground environment. The decision makers also need to have tools to help them make the decisions and the right parameters to input into their models and examine indexes such as Life Cycle Costs of Underground Works. Planners will lack credibility if the data cannot be quantified. This is where WG 15 can help.

Jan Rohde re-introduced a table of topic, sub-topics and keywords for discussion on future topics. It will serve as an introduction and road-map to key attributes which impact the environment and how to positively mitigate construction and operations concerns for Type B Projects- Projects whose construction or operation have affected the environment, Type C Projects - Projects where major environmental constraints were required during the construction, and Type D Projects - Projects whose design and construction has had to take into account major environmental problems. These Category B, C, and D categories have been gathered previously, and will focus on "external impacts during construction and operation of underground works". The other Categories require organization and possible resurveying of other member nations. The introduction will also include UNU benefits of underground works to environment in urban areas (or possibly integrated into "Environmental and Sustainable Development Reasons for Going Underground" if time allows). A survey of subsurface space utilization by country is contemplated if these types of statistics can be obtained from the member nations. Completion time was suggested as 3 years, with a draft of the introduction and assembly of case histories already gathered slated for Prague.

12.10. – WG 16 – Quality: Animateur: Claudio OGGERI (Italy), Vice-Animateur: Alex SAGY (Israel), Tutor: Martin KNIGHTS (UK) - Report presented by the Vice-Animateur:

The group met twice and 7 (seven) participants, plus the Tutor M. Knights (U.K.), were registered, from Korea, Israel, Japan, Norway and Italy.

First of all, a PPT presentation of the meaning of the technical issues of quality in tunnelling is now ready and will be submitted to WG Training and to the ITA and it will be placed on the website.

The group has received an invitation from the Executive Council to define the new directions for its activity, because the main original purpose has now been served. The following options will be considered:

- to update the report on Technical features of quality published two years ago (and to consider the need for a technical appendix);
- to cooperate with the risk assessment research currently being developed by other Working Groups;
- to close the activity of the group.

There is a need for improving Quality management on tunnel project as acknowledged by the task force on Risk Management.

Therefore we believe that the objective of the group for the next 12 months is to develop principles for a future Working Group that will provide guidelines for improved Quality Management in tunnelling. The future Working Group will try to build a Quality Management System (may be web based), that will integrate all the stages/processes of a tunnel project (including those provided in other ITA Working Group Guidelines).

The Group will also ask some of the other Working Groups to provide elements of the Quality which are involved in their Working Groups, in order to confirm the Executive Council, next year, on the need to start a new Working Group.

It is possible that the Working Group may have a small budget to process information the next 12 months.

The WG16, as structured today, will be definitively closed during the next World Tunnel Congress in Prague and the Animateur will lead the group until that event: he wants to thank the members of the Working Group for the support given throughout the last years and for the great opportunity to experience and to lead such an attractive activity, and extends the sincere thanks to the Executive Council members, the Tutor and the President for the encouraging suggestions.

12.11. – WG 17 – Long tunnels at great depth: New Animateur: Gerard SEINGRE (Switzerland), Vice-Animateur: Minoru SHIMOKAWACHI (Japan), Tutor: Piergiorgio GRASSO (Italy) - Report presented by the Animateur:

The meeting was attended by 13 members from 7 different countries: China, France, Italy, Japan, Korea, Sweden and Switzerland.

One third of the attendees were new members to the group.

The meeting focused on 2 aspects: presentation of relevant case histories of the new alpine base tunnel, and comments of outline of the Group's next report on long hydraulic tunnel at great depth.

Since the Istanbul meeting of last May, it was not possible to hold a meeting of the WG.

The Swiss member made a report of the evolution of the work on both AlpTransit railway base tunnels since last meeting. The state of excavation of the 55 km Gothard base tunnel was shortly presented. The 35 km Loetschberg base tunnel has been completed and will come next year into service according to schedule. The difficulties encountered during TBM excavation (spalling and blocks formation) were discussed.

The French and Italian members made a detailed focus on the problems that are now encountered during excavation of the lateral adits of the 53 km Lyon-Turin base tunnel. Convergences up to 2m appear after excavation in carboniferous shales under only 300m overburden. Several criteria and supporting methods were used to stabilize the convergences. In some places one tunnel had been reprofiled. The experience gained for understanding and resolving these problems were also presented generously by for sharing among the others.

The Japanese representative (vice-animator) gave his detailed comments on the outline of the Group's next report on long hydraulic tunnel at great depth. The Animateur proposed to translate in English the Japanese, the Korean and also the Chinese general specifications for mountain tunnels and for hydraulic galleries. The nation members will ask their own national association to agree with this proposal.

The Japanese representative also distributed a CD, which contains all the Japanese contributions at the WG meetings.

Finally, the working group elected Gerard SEINGRE from Switzerland as new animateur and Shulin XU from Italy as second vice-animateur.

12.12. – WG 18 – Training: Animateur: Daniele PEILA (Italy), New Vice-Animateur: Han ADMIRAAL (Netherlands), Tutor: Fritz GRUEBL (Germany) - Report presented by the Animateur:

Here in Seoul, seven representatives coming from France, Italy, Japan, Germany, The Netherlands, Romania and USA attended the meeting.

The work carried out by group members after Istanbul meeting was discussed.

a) The didactic results of the second edition of the Post-Graduate Master Course endorsed by ITA, which took place in Torino, and which was totally lectured in English were discussed and analysed. The general structure of the teaching lessons were analysed and the Tutor suggested that the programme and some relevant lessons presentation must be introduced into ITA web side. The Animateur will provide to send the material to the Secretariat.

The programme of the new 2007-08 of the Post-graduate Master Course was presented, this course will follow exactly the same teaching structure of the previous one with a merging of university professors and experts coming from industry. The WG members suggest to all member nations to disseminate this news in their countries;

b) The member from France presented a computer code which was already discussed in Istanbul and which can be used for teaching purposes. This code is available on a Web site. After the discussion and an analysis of the contents the WG's members think that it is an interesting didactic tool therefore the WG suggests that a link to the this didactical code can be introduced in the WG Training section of the ITA web site.

c) The WG's members, as they do each year, encourage the WG animateurs to prepare didactic power point presentation summarizing their work to be made available on ITA web site in the Training web page. The WG "Quality" announced the transmission of such a document.

- d) The WG members followed the discussion started in Istanbul of the definition of a minimum level of education in Tunnelling that should be given by various universities to prepare a good tunnel engineer.

Two documents prepared by the Animateur and the Tutor were analysed in detail and a draft of a proposal has been set up by the group merging the various university different educational level. The obtained results were finalized by the Animateur and the Tutor in a proposal which will be circulated in the next few months in the group and before summer will be sent to the secretariat for an official circulation inside the member nations.

- e) An updated list of professor involved in Teaching and Underground Construction was started to be implemented starting from the work already done in the past by the animateur.

This work will be finished before the end of the year and will be put in the Training sector of ITA web site.

The goal is to get the programme of the various university courses on tunnelling for a complete comparison.

- f) Since the present Vice-Animateur informed the Tutor that, due to a change of work, he will not be able to act in the future in the sector of training, the Group elected as vice-Animateur: H. Admiraal from The Netherlands

Finally the Animateur of the WG wants to highlight that Training is becoming an always growing task for the Association and that it needs always more effort and work from all the member nations to provide valuable information for the preparation of valuable documents.

The President pointed out the particular importance of the works of this Group in the success of the strategy of the Association.

12.13. – WG 19 – Conventional Tunnelling: Animateur: Heinz EHRBAR (Switzerland); Vice-Animateur: Robert GALLER (Austria), Tutor: Andre ASSIS (Brazil) - Report presented by the Animateur:

During the ITA World Tunnel Congress 2006 at Seoul the WG 19 had only one meeting.

The Working group meeting took place on Sunday afternoon, 23rd April at the COEX.

The meeting has been followed by 16 participants representing 13 nations.

In the review of the activities of the working group since the last World Tunnel Congress at Istanbul the accomplishment of the working schedule could be noted.

Due to this fact, the final draft of the working group's general report on conventional tunnelling was sent to the delegates at the beginning of April 2006. It was the basic document for the discussions at Seoul.

The second draft, which was the actual version during the World Tunnel Congress at Istanbul, has been modified in a massive way until September 2005. After these modifications the third draft could be sent to the delegates in September 2005 for further discussion. Two smaller meetings were held for finalizing the draft of the Working Group's report on "Conventional Tunnelling".

The first meeting took place in November 2005 at Leipzig during the STUVA – Congress and the second meeting in March 2006 with members of the German DAUB at Munich.

The final draft could be sent to the delegates at the beginning of April 2006 as a result of these discussions and the contributions mainly from or colleagues from Austria, Germany and Switzerland. The participants of the WG 19 meeting at Seoul discussed the final draft and

approved it finally with some minor changes. The finalized report will be sent to the tutor within the next few months for approval by the executive council.

The working group discussed also the main topics for the future. Two items have been selected for being subject of more detailed discussions with the aim to prepare additional reports or guidelines of the working group:

- Monitoring in conventional tunnelling, coordinated by Robert Galler from Austria
- Contract models in conventional tunnelling, coordinated by Nasri Munfah from the United States

It's the aim of the working group to have already first substantial results for a discussion at next WTC in Prague.

As concluding remark one can state that there will be a first basic document for further discussions. The working group has been working very efficiently during the last two years and with a high stability in the representation by the member nations. There will be an interesting future for the working group 19 with the selection of two items "Monitoring" and "Contract Models" for the future discussions and the elaboration of corresponding detailed reports.

12.14. – WG 20 – Urban Problems – Underground Solutions: New Animateur: Markus THEWES (Germany); New Vice-Animateur: Gerard ARENDS (The Netherlands) and Junji NISHI (ACUUS); Tutor: Harvey PARKER (USA) - Report presented by the Animateur:

Working Group 20 with the topic "Urban Problems – Underground Solutions" met once during the Seoul General Assembly. There were ten attendees from the following nine countries: China, Czech Republic, France, Germany, Japan, Korea, The Netherlands, Sweden and the USA. The group elected both a new Animateur and Vice-Animateur. Accordingly the group of Animateurs are now represented by:

- Animateur: Markus Thewes, Ruhr-University Bochum, Germany
- Vice-Animateur: Gerard Arends, Delft University of Technology, Delft, Netherlands
- Vice-Animateur: Junji Nishi, Urban Underground Space Centre, Tokyo, Japan

The group expresses its most sincere gratitude to its retired tutor Jean-Paul Godard for his great help and support over the years, a new tutor is expected to be assigned soon by the executive council.

The goal of the Working Group is to prepare a report on

- typical urban problems,
- the innovative and sustainable solutions the underground has to offer,
- and the most important factors within the decision making progress for such solutions.

The report will be completed by a collection of 10 to 20 worldwide case history examples which will provide a good illustration for the most significant underground solutions to urban problems.

The report will be directed to planners and politicians to provide creative and efficient ideas for the solution of urban problems and will serve as a decision aid. The focus of this product will be somewhat less on technical details but more on strategic aspects of urban planning, may they be of social, economical, ecological or aesthetical background.

The Working Group has finished its inventory of urban problems which can be solved by using the underground and the respective subsurface solutions. Valuable project data on innovative underground solutions was presented to the group by ITA president Harvey Parker and by Pierre Duffaut during the meeting.

16 – DECISION CONCERNING THE AMENDMENTS OF THE STATUTES AND OF THE BY-LAWS

The Dutch representative requested that the drafting should be as concise as possible.

The General Assembly unanimously approved the project presented by the Executive Council.

17 – DECISION CONCERNING THE STRATEGY OF THE ASSOCIATION

The General Assembly unanimously approved the project presented by the Executive Council.

18 – BUDGET: DRAFT BUDGETS FOR 2006 AND 2007

- a) The draft budgets for 2006 and 2007, sent along to the members with the notice to the General Assembly, were presented and commented by the Treasurer. (Encl. 5)

In reply to the questions from the Dutch representative, he reported that the budget allowed to the Working Groups is never entirely used, and that this question will have to be examined at the next meeting of the Executive Council and of the Animateurs. The representative from the United Kingdom pointed out that this question also comes under the management of the Animateurs.

- b) The General Assembly unanimously approved the draft budgets thus presented.

19 – PREPARATION OF THE GENERAL ASSEMBLIES 2007 AND 2008

19.1 General Assembly 2007

The Czech President Ivan HRDINA presented the main arrangements made; no remarks were expressed from the Member Nations.

19.2 General Assembly 2008

The President of the Indian Organizing Committee Govind N. MATHUR reported about the main arrangements made, and distributed a brochure of presentation; this presentation gave rise to no remarks from the Member Nations.

20 – CHOICE OF THE PLACE FOR THE GENERAL ASSEMBLY 2009

The scrutineers were the official representatives from Canada (Rick LOVAT) and from Italy (Daniele PEILA).

The General Assembly proceeded to the vote; the results were the following:

- Hungary : 18 favourable votes
- United Kingdom : 17 favourable votes

Hungary will organise the Annual Congress 2009, in Budapest, from 23 to 28 May, 2009.

21 – OTHER BUSINESS

- a) The President reported that the next Executive meetings will be held:
- in Lisbon (Portugal), on 1st and 2nd July 2006, on the occasion of the organization by the Portuguese group of a seminar on 29th and 30th June;
 - in Sharm-El-Sheikh (Egypt), on 4th and 5th November 2006, on the occasion of the organization by the Egyptian national group of a seminar on 6th and 7th November;
 - in Lausanne (Switzerland), on 10th and 11th February 2007;
 - in Prague, on Saturday 5th, Wednesday 9th and Friday 11th May 2007, on the occasion of the annual meeting 2007 of the Association.

Other ad hoc meetings will be organised according to the offers from the Member Nations.

- b) The press release will be available at the beginning of the afternoon at the Secretariat.

22 – CLOSING SPEECHES

The President

Closing Speech to ITA GA on Wednesday by Harvey Parker

It is important that the business of ITA be done throughout the year and not just at our annual meetings. I ask each of you, our member nations, 1) to communicate with us frequently, 2) to submit articles every 2 months to the ITA@News, 3) to keep your home page on our web site up to date, 4) to answer questionnaires promptly, 5) to help us increase our membership and to be an active member of our ITA family throughout the year. This is for your benefit.

We will be sending each of you a few questionnaires in the coming months. Please act on them and send your results back in a timely manner. These are very important to the functioning of our Association. In this regard, I want to thank the Member Nations who responded so quickly to last year's questionnaire on Acrylamide grout. It was very helpful to Working Group 15 and our industry as a whole.

As you know, Claude and I as well as other members of our Executive Council try to visit many of you in your country to help you in your country to improve our communications. We look forward to improving our communication with you either directly or via email as the year develops.

Tunnels and the underground in general are environmentally friendly. I believe that much of our future work will be related to the environment and sustainable development. Also, the rapid development of mega cities will also create a huge demand for infrastructure. We must be proactive in getting our message to the owners and decision makers. In order to be able to meet this huge demand for many tunnels to be built at a fast pace, we will need to emphasize training and risk management. So, please give training a high priority. To achieve the needed high rate of tunnel construction without increasing risk and compromising safety will require many things but certainly a dramatic increase in training at all levels.

Let's get our message to the owners and decision makers. Present our message to them in every way we can. Articles about tunnels and tunnel successes in the popular press in your country will help. Articles in the journals and proceedings of conferences that are for owners and decision makers will be even better. As you educate the owners and decision makers, please give them information about the need for risk management and the ITIG Code. It is vital that owners and decision makers begin the risk management process as early as possible.

Once again I am asking that each of the working groups and Member Nations to do everything possible to help our industry in reducing accidents and improving safety. This is important because many of our current and future projects are bold and visionary. I suggest that you tell your decision makers that tunnels and the underground are “Investments, not Costs.”

Finally I wish to re-emphasize the Membership Drive we are embarking on. As you can see from our discussion of our budgets today, ITA needs to dramatically increase our membership at all levels. We have an ambitious program of development and improvement of ITA. We will be severely restrained in our quest to be the “Unquestioned Leader in Underground Space” unless we can obtain new financing. So as you go about your business, please do everything you can to help us increase our membership.

As you know, I emphasize the ITA family. There are many of your past or inactive members who no longer come to the annual meetings. Please go back to your countries and let them know what ITA is doing and tell them they remain part of the extended family of ITA. In fact they can stay connected easily and up to date by getting the ITA@News or on the web.

Again, I thank you for such successful meetings during this week. You can be proud of your accomplishments. We look forward to working with you closely throughout the coming year and seeing you again in good health and good spirits in Prague.

This meeting is adjourned.

The President

H. PARKER

The Secretary General

C. BERENGUIER