

Speech at Opening Ceremony

Yannis Alavanos, President TCG

Ladies and Gentlemen,
Dear Colleagues

On behalf of the Technical Chamber of Greece (TCG) I would like to welcome you to Athens, in the 27th General Assembly of the FIG Working Week. In Athens that now has the necessary infrastructure to correspond to a role that previously satisfied or monopolised: centre of activities and a bridge that unites Europe, the Balkans, Asia and Africa. In modern Olympic Athens with the history of 30 centuries to be imprinted in an one-hour ride in the historic centre around the Acropolis (you should not refuse the relevant proposal of the organising committee of the TCG).

The TCG is an Institution functioning under Public Law, the greatest and most historical scientific body in Greece. In November of 2003 the TCG completed 80 years since its establishment. This was an occasion to have special sessions where in each one of them, the nation's leadership (President of Democracy) along with the political leadership (today's Prime Minister, Ministers from the Panhellenic Socialistic Party -PASOK, the secretary General of the Communist Party of Greece, the President of the Coalition of the Left and Progress-Synaspismos) honoured the event as well as presented their views for the development of the country and according to their opinion the contribution of the TCG to it.

The TCG represents all the Qualified Engineers of the country, of University levels and in the vast majority of basic education of 5 years. The members of the TCG are 93827 engineers (6902 of which are emeritus members) and 6023 are Rural and Surveying Engineers (275 emeritus members). For every 1000 people in Greece we have a threefold of the average number of engineers in the European Union countries. This can be interpreted by historical reasons, from the inclination of the Greeks to have a high level of education, from the fact that Greek engineers are in great demand employed scientists (and this in turn is due to the depth and the level of their education), from the low level of productive structures of the country that cannot support in time depth potential with a lower theoretical level of education, but also to the great growth rate of the recent years, which is basically contributed to the section of construction. Over the last years Greek engineers had a very low percentage of unemployment. Mainly this was due to the Olympic Works and the co-financed ones by the European Union.

The activities of the TCG (scientific congresses, conferences, lectures, publications, seminars, study groups, representations) concern a variety of sectors, in which the most competent scientist give their opinions and modulate the positions and suggestions of the TCG. Suggestively the activity of the TCG, as it is recorded over the last three years goes as following:

- *Environment* (Urban Transports, Forests, Fires, Exhaust fumes, Toxic Waste, Wastes, Industry Pollution, Quality of drinking water, Operation of Small Units of Biological Cleaning). Top event (every 2 years) *HELECO*, an International Exhibition and Conference that the most significant constructors in technology protecting the environment from all over the world and the most specialised scientists participate in it.
- *Energy* (Fuel Deregulation, Geothermic Energy, Oil circuit, Natural Gas, Aeolian Energy, Solar Energy, Lignite and solid fuel, Renewable Sources of Energy, Power Electronics)
- *Industry* (Modern advancement and prospects of development in Mining and Metallurgy, Shipyard Industry, Bauxite circuit, Defence industry, Metallurgy of gold, Safety and Health at Work, De-Industrialisation, Concrete Industry, Shotcrete)
- *Urban planning – Land planning* (Illegal constructions, Transfer of the Building Coefficient, Olympic Games, Street layout, Waterstreams, Positions in drafts of law for «Land planning – Urban planning – Targets – Politics - Results», Town Planning and Local Government, Digital City)
- *Cultural Heritage* (Acropolis, Monument Surveys, New Towns built on Old ones, Architectural Heritage in the Balkans, War and Monuments)
- *Great Works – Public Works* (Bridge Construction, Metro, International Airport “El. Venizelos”, Earthquakes, Industrial Buildings, Underground Works, Transportation axes, Floods, Seismic Regulation, Rio – Andirio, the Role of the Public Administration, Studies of Bearing Construction (Static Studies) of building works, Motorway Lighting, Bearing Construction and Architectural Design)
- *New Technologies, Local Government, National Cadastre*
 - *Organisation of regular Panhellenic Conferences of Concrete, Seismic Engineering, Architecture, Road Construction, Greek Language and Terminology, Geo. Technology and Environmental Engineering, Mineral Wealth.*
 - Sections that have been founded and are under the auspices and the funding of the TCG such as the *Greek Section of Concrete, the Hellenic Section of ICOMOS, the Greek Section of Seismic Engineering* and the *Greek Section of Information and Communication* which is currently being founded, with important activity and intervention to appropriate issues.
 - A Committee has also been formed that has been studying the *Seismic Reinforcement of Existing Buildings (EPANTYK)*, which has assumed, sponsored by the TCG, a series of important activities, such as: the inventory of the existing constitutive wealth of the country, the evaluation of the seismic vulnerability of the buildings, studies methods for the inventory on site of the material characteristics, recommendations for the editing of studies for seismic retrofitting, the priority policy for seismic retrofitting, legal and professional engineering matters concerning the above.

- *Conducting Research* in regular time periods, concerning all the engineers of the country, from which statistical data are gathered for the employment of engineers, for their education and training, for the job market, according to which the positions of the TCG are shaped.
- *Data Bank*: It is about a particularly significant tool, since it provides access to the Internet for every engineer-user with low cost, complete and valid information in matters concerning his work. Today there are 12.000 active subscribers, who intensely use its services during work. There are about 25.000 connections daily and about 80.000 e-mails being handled. Recently a new portal has been completed, based on new equipment and software of high availability, where every service or activity of the TCG will be directly imprinted. In the near future the Data Bank will expand in new generation communications and in new services that will further facilitate the members of the TCG in their professional activity (provision of network storage area and exchange of files, assignment of digital signatures, upgraded e-mail service and automation in the management of administrative issues).
- *The Institution of Continuous Education and Training of the Members of the TCG (IEKEM)*: offers to all the Engineers of the country the necessary knowledge and information concerning their work and it also directs them through the professional training to specialisation that is required in the job market. It also modulates conditions of development and modernisation of Greek business with trained and prepared technicians. Self-financed seminars of IEKEM TCG : in 1996 – 172 people, in 1997 – 383 people, in 1998 – 525 people, in 1999 – 279 people, in 2000 – 1005 people, in 2001 – 1349 people, 2002 – 1245 people. Subsidised seminars in IEKEM TCG : in 1995 – 300 people, in 1996 – 370 people, in 1999 – 503 people, in 2000 – 454 people. At the moment 23 seminars are being organised.
- *Awarding of prizes* to students of Polytechnic Schools (about 300 yearly) and diplomatic theses that distinct for their completeness and originality (about 50 yearly).
- *Cooperation with the Hellenic Organisation for Standardisation (ELOT)*: Recognising the huge importance that standardisation has acquired in modern economy, but also the business and product certification, the TCG has instituted collaboration with ELOT for a series of activities (participation in Technical Committees of the EAOT (37), Standards Documentation, Interpretation of Eurocodes (7), sponsored by the TCG) and has started the procedure of certification of the TCG according to ISO 9001. The founding of the Certification Organisation and the participation of the TCG to it, as well as the participation of the TCG to the Administrative Council of the ELOT has already been agreed. A Guide of Structural Materials has been composed for concrete, plaster, steel of reinforced concrete, inactive materials, aluminium profile, bricks and concrete.
- *The practice of the engineering profession* and his protection in the framework of the security of the general interest of the society (employment, taxation, fees, insurance, professional rights, professional parities, prosecutions). About 200 cases

for fees claim of engineers are yearly conducted and about 300 cases of disciplinary prosecution are put on trial.

- *Operation of 17 self-existent Regional Sections* all over Greece, with significant scientific work and intervention to the particular issues of the Region. There has also been an effort in acquiring privately owned buildings that will substantially operate as cultural centres in several towns of Greece.
- *Operation of exemplary Library and Documentation – Information Centre* as well as Libraries in Regional Sections that provide technical and scientific information to engineers, students, public and private sectors and to any interested citizen. In the Library collection there are 56.000 books, 5.000 bulletins from Greek and international organisations, 1.300 titles of magazines (about 750 current ones), and 1.950 studies of the TCG (from conferences, congresses, seminars and lectures). In the Standardisation office there are collections of ISO, ELOT, EN, DIN, BS standards, as well as in books 260 DIN and 160 ASTM. There are 5 standardisation committees in operation. About 6.000 engineers, students and other citizens visit yearly the Documentation and Information Centre, while 300 requests of remote users are being satisfied. Through the Library Programme there is important exchange and borrowing procedure between the Documentation and Information Centre and the Libraries of the Regional Sections of the TCG, so to directly service the users of the Region.
- *Assigned Delegates* in councils and committees, as well as in International Organisations and European Unions, who have been appointed in important places and promote the positions of the TCG. Collaboration protocols have been signed with 18 International Organisations and the TCG is a member and pays subscription to 16 International Organisations. Every year delegates of the TCG are appointed in more than 90 Councils and Permanent Committees that constitute several Ministries, in more than 100 Councils and Permanent Committees that constitute several Organisations, Services, Institutions and Prefectures and in more than 60 individual recommendation committees for studies and works.
- *Development of Important publishing activity*, with periodical publications (Informative Bulletin which is the greatest weekly magazine in Greece, Two-month Publications of Technical Chronicles, Scientific Publications in 5 Specialities) and special publications of the Technical Chronicles dedicated to important issues that interest the technical world. Also from late 2000 until today 25 books have been published.
- The scientific work of the TCG that is being produced by its *Permanent Committees* (10 have been formed out of 31 suggested ones), its *special scientific committees* (44) and its *work groups* (about 50), in which a great number of engineers is being activated. Thirty-eight offices operate today in the TCG.

It is an important element for politics that in the framework of the role that the TCG performs, the formation of a modern policy for the issues of land administration in our

country. So we consider it perfectly normal to seek for the greatest possible cooperation and participation in the activities of the FIG, to draw conclusions and ideas that are handled all over the world through the activities of the Federation, giving the possibility to Greek surveying engineers to offer by their own research, knowledge and remarkable experience.

The TCG along with the Hellenic Association of Rural and Surveying Engineers (HARSE) put every possible effort for the success of this conference. A great team worked hard, with selflessness and joy in order to have an impressive event.

The same members of the team claim that the whole effort and hard work were combined with the intention to connect the workings of the FIG to the Olympic Spirit, the values and its glory. This is imprinted in the title of the conference, presented and analysed in papers of the distinctive invited speakers.

Greece will organise great Olympic Games, with total security. The events intervened from the previous games of Sydney have raised the expenses for the existence of secured conditions for the athletes and visitors six times more than any other organisation. And this happens at the time that the Olympic Games take place in a peace loving country. This is recorded by their attitude in all the matters that shook the world over the last fifteen years.

All of the above along with the fact that the Olympic Games are one of the greatest commercial business world wide, Greece will be consistent to its commitments (even though that the proposal of the Olympic armistice did not have significant international acceptance) has contributed to the extremely high cost of the games. A cost that aggravates extremely worsens the Programme of Public Investments in Greece. Consequently the construction of important projects is being postponed, mainly in the Region, but also projects co-financed by the European Union.

The victim of such a delay likely seems to be the Hellenic Cadastre. It started though with an impressive delay in comparison to most European countries in 1993, after the proposal and substantiation of the TCG, in cooperation with the HARSE and other scientific bodies of the Local Administration. It was characterised as one of the greatest among other really great projects that are developed in our country over the last few years. It faced the “pathogenesis” of the Greek administration, legal problems dating back even to the period when Greece was not an independent country, issues that created delays and caused interventions of the European Union, not always justified or beneficial. In any case the problems were solved, Greece seems in some regions to have acquired a modern tool of development and administration and possesses experienced and organised scientific workforce that can offer its services to other countries.

The problem that appears now in Greece is the funding for the completion of the project, although there were legal adjustments that solved the problem and still exist. The Cadastre utilising the current experience and the new technologies will be a much faster and more economical project.

In ancient times the Olympic Games were not only a great athletic event, but also a really great cultural event, where philosophers, intellectuals, the literati and artists, actors, sculptors

and the whole world of the art participated and gave another dimension to the athletic event. Following the same logic, parallel sessions were also organised:

- scientific meeting concerning the Archaeological surveys where the contribution of the Surveyor to the civilisation and the registration, documentation and preservation of the cultural heritage, will be recorded in cooperation with the FIG
- scientific meeting concerning hydrography issues
- scientific meeting concerning issues for the history of Surveying and measurements. In combination with all these and parallel with these activities we organised a very important
- exhibition of *ancient technology*, where you will be given the chance to admire closely the technological achievements of Ancient Greece together with models of several of several measuring devices used in topography and astronomy.

According to the presentation of the committee that attended to the exhibition: One fundamental aspect of life in ancient Greece, although far less known, is Technology. A civilisation, however, cannot possibly be approached without some understanding of the basic social phenomena that underlie it - and these of course include its economy and its technology.

Like all social phenomena, technology has its roots in an initial stage shaped by a great many outside influences. The 6th century BC, however, something different began to happen in technology as used in Greece: slowly but steadily a new (and quintessentially Greek) activity, namely Science, began to impregnate this empirical technology. From this union would come an abundance of fruits. First of all, technology itself became more productive (more economical, broader in its application) and technological innovation easier (rapid technological progress). Second, with science and technology now working in tandem, a new kind of need appeared for technology to serve: This was science itself, which needed a variety of instruments for observation and measurement. These "technological" products are technology's return for the gifts it received from science! In ancient Greece, the multiple links between technology and science may be observed many times over: The empirical techniques used for measuring fields developed into the science of geometry. The great mathematician Thales of Miletus was also a fine engineer, who by "diverting the Alis River from its ancient bed by means of a canal enabled the army of Croesus to cross over" (Herodotus, I - 75).

In its turn, the science of geometry became the foundation for a whole new series of applied sciences, from optics, astronomy and geography to mechanics and statics.

There can be no development in technology (nor, for that matter, in science) without a well-established system of measurements. Distances, forces and time must all be measurable easily, accurately and precisely; for without this capability, technique may never progress beyond its infancy of trial and error. This is why we start by stressing the importance of methods of measurement, as these were developed in Ancient Greece and, even more important, as they were used for technical purposes.

- presentation of the Olympic Works on site
- technical exhibition

The reduced registration fee for students and post-Graduate ones, the accommodation and free participation of colleagues from developing countries, and mainly the parallel 1st Conference of Rural and Surveying Engineers, we believe that actually prove the

significance we give to the FIG, to its workings, the spread of its presence and its suggestions.

I would like to thank all of you that participate in the conference and have prepared papers, the Council and Office of the FIG for its continuous support and cooperation during the preparation, the invited speakers, Greek and foreign ones, our delegates in the FIG, the exhibitors, the Study Institution of Ancient Greek Technology, the sponsors of the conference, the members of the Organising Committee, the Secretariat and everybody who worked for these events.

I wish you every success to the conference,

Enjoy your stay in our country.

I hope you will be given the opportunity to enjoy the beauty of Athens, and to find out as much as possible during the conference about the progress of our country.

Yannis Alavanos
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