



ORGANIZZAZIONE INTERNAZIONALE TRASPORTI A FUNE  
INTERNATIONALE ORGANISATION FÜR DAS SEILBAHNWESEN  
ORGANISATION INTERNATIONALE DES TRANSPORTS A CÂBLES  
INTERNATIONAL ORGANISATION FOR TRANSPORTATION BY ROPE  
ORGANISACION INTERNACIONAL DE TRANSPORTES POR CABLE

# OITAF NEWS

2<sup>nd</sup> Half-year 2000

The same issue has been published:  
in German  
French and  
Italian

## **O.I.T.A.F.-NEWS 2/2000**

President's preface

Dear friends

There are no words to tell our bewilderment, nor tell how we were taken aghast by the unthinkable dimensions of the event; bewilderment because the tragedy in Kaprun has wakened our awareness to the fact that may be transportation by rope is not the safest means of transportation and that we, that is manufacturers, operators and, of course supervisory authorities must loose no time to learn from the teachings of the disaster and draw the necessary consequences. There is no clear indication yet of the actual cause of the accident, but it is clear that we must spare no effort to prevent a likely accident to happen ever again in the future. O.I.T.A.F. as a whole, and all its committees are summoned to discuss the accident and its consequences as it becomes to competent experts of the profession in order to re-establish the confidence into the safety of ropeways. I would also like to express my thanks for the many words of sympathy and comfort that help us recover the strength we need.

Let us pay a silent tribute to the victims of the tragedy

yours

Horst Kühschelm

### **Note of the Secretary General**

The news of the inconceivable accident at the Kitzsteinhorn reached me while I was writing the introductory note to this issue. So great was my consternation that to continue to write has become impossible. Now I am picking it up from scrap, first of all to express our sympathy to the relatives of the victims and tell them that we mourn the dead with them and the people of Kaprun and other towns who mourn their dead.

O.I.T.A.F. and all its members, supervisory authorities, manufacturers and operators of ropeways, deeply struck and dumbfounded by the uniqueness of the terrible accident are determined not to let this accident fall into oblivion and hence to address in all O.I.T.A.F. committees the issue of fire prevention.

Pointless to make now any conjectures about the causes of the accident and involved responsibilities. Anyway we are confident that the investigating authorities and the Ministry of Transports of Austria will spare no effort to arrive at a clear and non ambiguous assess-

ment of the causes of the accident for us to be able to make best value of the knowledge thus acquired and put it into practice in our regulations and existing installations.

It is quite obvious that publication of the present issue of the **O.I.T.A.F.-NEWS** has been overshadowed by this terrible event, which is also the reason why we were not able to produce it within the limit of time we had set our selves.

As for the last issue of the **O.I.T.A.F.-NEWS** may we ask you to take note of the following

### **Correction**

of a statement made in the report on committee n° 4 .

In the paragraph on the Transferability of Skipasses on page 21 the report states in the last sentence that skipasses are transferable in France. This is not correct. It should read :

**In France skipasses are not transferable.**

The précis-writer wishes to apologize for this error.

The format of the **O.I.T.A.F.-NEWS** is another issue which regularly pops up in the discussions with the readers. We have indeed chosen to adopt the A3 format with the text written in four languages to stress the international character of the bulletin and because it can be put away in any standard file once it has been folded in the middle to give an A4 format. And seen that by doing so we have only one galley proof printing is much cheaper. Essentially there are two diverging views on this issue

- people who feel we ought to have four different issues, one for each language, possibly in colour print and with some ads added
- people who feel that we should keep the News as they are because thus we have a format that offers the possibility to print news in four languages and fold the paper into a smaller one and because it is a feature specific to **O.I.T.A.F.-NEWS** and different in shape and presentation from any other magazine.

Views on this issue are welcome and thank you in advance for sending them to the Secretariat.

In this issue you will find information on the activity of the committees and working groups

and, of course, the Management and Executive Committees.

It is the first time that in an issue of the **O.I.T.A.F.-NEWS** we speak of people who after long total commitment and having earned great merits for O.I.T.A.F. and transportation by rope in general have left us. either because of retirement or death. This is the way to thank them for their commitment.

You will also find a report on the last International Meeting of Supervisory authorities (IT-TAB) and the latest activities and projects of OIPEEC.

Another bit of information you are given is a short report on the decisions taken by the last meeting of CEN TC 242 held in Paris on November 30 and 1<sup>st</sup> December.

Finally I would like to draw your attention to the fact that **O.I.T.A.F.-NEWS** are published in INTERNET, O.I.T.A.F.. Homepage <http://www.oitaf.org>, page **O.I.T.A.F. NEWS**.

It is our intention to round of the inforamatory content of **O.I.T.A.F.-NEWS** by adding information on interesting new developments trends of ropeway construction and transportation by rope altogether. This is why I am going to give you a bit of information on a new, quite unusual project.

Finally you will find a report on a publication that will no doubt arouse the interest of all lovers of ropeway history.

Information about a ropeway library concludes this issue of **O.I.T.A.F.-NEWS**.

## **ACTIVITIES OF THE MANAGEMENT AND THE EXECUTIVE COMMITTEES**

### **Executive Committee**

The Executive Committee met for a meeting in Milano on September 22, 2000 attended by the chairmen of committee n° 1 (Peter Sedivy) and committee n° 2 (Enrico Bazzaro) and the convener of the working group „Environment Forum (Michael Manhart)

The Committee addressed the following items

Reports on the activity of O.I.T.A.F. committees. The chairmen of committee n° 1, committee n° 2, committee n° 4 and the convener

of the working group „Environment forum“ reported on the activity of their committees or working group.

Organisation of a Seminar within the framework of ALPITEC in Bolzano, autumn 2001

Peter Sedivy reported on the outcome of discussions of his committee regarding the title to be given to the forthcoming seminar. The proposal will be submitted to the approval of the Management Committee. For further details see chapter on the activity of the „Management Committee“.

Questionnaire to be circulated to all members of O.I.T.A.F.

The President of O.I.T.A.F. has drawn up a draft questionnaire to be circulated to all members for them to express their satisfaction or dissatisfaction with activities undertaken by O.I.T.A.F. and make proposals for possible improvements. The draft proposal has met the approval of all participants.

Enclosed to this issue of the **O.I.T.A.F.-NEWS** you will find the approved form of the questionnaire and are requested to send the compiled form back to the Secretariat.

### **Management Committee**

The Management Committee met for their 96<sup>th</sup> meeting on October 25, 2000 at the Airport Klotten near Zurich.

For the first time the meeting was attended by two members who have no right to vote, Mr. Stefan Krychniak, representing the Polish Government and Mr. Gorazd Bedrac, representing the supervisory authorities of Slovenia. The third member who has no right to vote, Mr. Grešo, has sent his apologies.

They were welcomed as new members of the Management Committee by the President of O.I.T.A.F., Dr. Kühschelm.

The Management Committee addressed the following items of the agenda :

Report on the meeting of the Executive Committee held on September 22, 2000 in Milano.

Dr. Brugger submitted a report on the activity of the O.I.T.A.F. Committees. Details are reported further down.

New future organization and opening of O.I.T.A.F. to other continents.

The meeting was given the gratifying information on the lively exchange of correspondence with the Chinese member of

O.I.T.A.F., the China Pan-Tourism Industry in Beijing. The scope of activity of this company is the construction and operation of ropeways for the transportation of tourists, as well as the development of new ski areas. The company intends to organize in China together with the National Center of Passenger Aerial Ropeway Safety Supervision (a category A member of O.I.T.A.F.) and the Beijing Materials Handling Research Institute and the patronage of O.I.T.A.F. the first Chinese International Ropeway, Ski Equipment and Ropeway Engineering Exhibition and the first China International Ropeway Technology, Safety and Management Seminar to take place mid or end of September 2001 in Beijing.

During the Interpin exhibition in Innsbruck last October the President of O.I.T.A.F. has had contacts with leading personalities of the above private companies and the above institutes and authorities and has noticed that China's great interest to collaborate more closely with O.I.T.A.F. This is the reason why the Management Committee have decided that an O.I.T.A.F. delegation composed of the President, the first Vice-President, the Secretary General and two additional members should pay a visit to China in late Spring 2001 in order to see on the spot whether all prerequisites for the establishment of an intercontinental section of O.I.T.A.F. are met as well as to discuss ways and means to improve contacts with the Chinese companies and institutions.

#### Organisation of an O.I.T.A.F Seminar in 2001.

You will certainly know that with the exception of the years in which O.I.T.A.F. organizes the International Conference on Transportation by Rope O.I.T.A.F. organizes each year a seminar on a specific theme. At its last meeting the Management Committee entrusted to Committee n° 1 the task to suggest a subject matter and title for the next seminar and organize the seminar with the help of the O.I.T.A.F. Secretariat. Dr. Brugger reported that the members of committee n° 1 had suggested several subject matters and that after a lengthy discussion they have agreed on the following title : Technical limits set to the construction of ropeways. After a lengthy discussion the Management Committee, decided to adopt the title which has been suggested by the Executive Committee, i.e.

#### Extent to which present day technical limits affect construction of ropeways

and to have a seminar on the above theme organised within the framework of ALPITEC which is scheduled to take place from October 11 to 13, 2001 in Bolzano (I).

The names of the lecturers and the titles of their lectures will be published in the next issue of **O.I.T.A.F.-NEWS**.

#### Approval of the budget forecast 2001.

The Management Committee approved the budget estimate 2001 which had been drawn up by the Treasurer. For your information you will find the approved budget estimate enclosed to this issue of the **O.I.T.A.F.-NEWS**.

#### O.I.T.A.F. membership

The Management Committee has examined the present situation with regard to O.I.T.A.F. membership and has noticed with pleasure that the number of members has increased. The present number of members is as follows:

Category A :(12), category B : (10) , category C : (4) , category D : (21), category E : (56), category F : (31), honorary members : (6)  
Broken down according to their nationality the numbers are as follows :

Andorra: (2), Austria: (26), Brazil: (3), Bulgaria: (1), Canada: (1), China: (8), Finland: (1), France: (8), Georgia: (1), Germany: (10), India: (4), Israel: (2), Italy: (27), Japan: (3), Norway: (2), Poland: (3), Singapore: (2), Slovakia: (1), Slovenia: (2), Spain: (9), South Africa: (1), United Kingdom: (2), USA: (3).  
International Associations: (2)

#### **THE PAGE OF O.I.T.A.F. WORK COMMITTEES**

This is the page where readers may find reports on the activity of O.I.T.A.F work committees and where individual committees are offered the possibility to illustrate their scope, activity and achieved results or to convey specific information to all members of O.I.T.A.F.

## **ACTIVITY OF O.I.T.A.F. WORK COMMITTEES**

### **Committee n° 1: Ropeway engineering and technical recommendations.**

Chairman: Dipl. Ing. Dr. Peter Sedivy, Federal Ministry for Transports, Technology and Innovation, Austria.

Report submitted by Dr. Sedivy

This year the committee n° 1 met twice. The first meeting convened on May 11 and 12, 2000 in Innsbruck hosted by the Civil Engineering Faculty of the Technical University. The second meeting convened on September 18 and 19 in Vienna hosted by the Austrian Ministry for Transports. Both meetings record a satisfactory attendance of more than 20 members representing six European countries known for the importance of their ropeway industry.

Most delegates appointed to sit on this committee have indeed attended the meetings. After some minor changes the present composition of committee n° 1 is as follows.

Prof. Dr. Ing. Enrico Bazzaro, Dr. Ing. Rudolf Beha, Dipl. Ing. HTL Walter Bollinger, Jean-Claude Bonneton, Ing. Karl Daxner, Dipl. Ing. Wolfgang-Dieter Feix, Dipl. Ing. Christoph Hinteregger, Ing. Bernd Meindl, Ing. Egon Böhler, Directeur General Adjoint Jean Paul Huard, Gerard Marguet, Dipl. Ing. Wilhelm Kaul, Dr. sc. techn. Gabor Kovacs, Dipl. Ing. Firtz Meyer, Dipl. Ing. Roar Moe, Dr. Ing. Claudio Canessa Parodi, Dr. techn. Gabor Piskoty, Dr. Ing. Pierpaolo Siazzu, Dipl. Ing. Walter Sehnal, Alain Soury Lavergne, Dipl. Ing. Istvan Szalai, Ob. Ing. Dipl. Ing. Helmut Weiss, Dipl. Ing. Hans Ulrich Zbill, Dipl. Ing. HTL Daniel Ziegler. In addition there are three corresponding members of the committee, i.e.

Dr. Ing. Francisc Culleré, Head of Department, Dipl. Ing. Dr. Hans Rudolf Gassmann and Prof. Dipl. Ing. Dr. techn. Erwin Wrбка

Prof. Wrбка, past chairman and now corresponding member of the committee n° 1 attended both these meeting. and made most valuable and helpful contributions to the discussion and the solution of outstanding problems..

We are also indebted to our interpreter Mrs. Renata Rassin Penso, who for many years now has given us at all meetings excellent translations into French and has thus to

achieve within a short spell of time very satisfactory results.

The committee's main activity was and still is devoted to drafting of international technical recommendations. At present the committee are discussing

### **Recommendations for technical peculiarities of double monocable aerial ropeways**

Actually most of the discussion is done, which means that all the committee still need to do at their next meeting is an editorial revision of the draft. In this draft recommendation special is given to the specific structural features and the resulting specific behaviour of the system (resistance of the track that accounts for reduced transverse swinging and inclination of carriers, additional external loads acting on rope supports etc) The recommendation is intended as a complementary recommendation to existing technical regulations and standards.

As for the future, the Management Committee has entrusted committee n° 1 a highly exacting task likely to enhance the committee's prestige, i.e. the remit to organize an O.I.T.A.F. seminar within the framework of the international ropeway exhibition ALPITEC in Bolzano in 2001. The committee addressed this issue at its meeting in Vienna and the exchange of views on themes that have been suggested has shown that there is no shortage of technical questions that vest a general interest. Information of the committee's final choice has been sent to the O.I.T.A.F. Secretariat in view of its submission to the meeting of the Executive Committee in Milano, Six members of the committee n° 1 volunteered as lecturers of the seminar. Seen that membership in the committee, as well as the work done to write lectures, are honorary unpaid for activities of the members we would like to express our special thanks to members who have spontaneously offered to make this additional contribution.

### **Working group: Non public ropeways „Material handling ropeways and cable cranes“**

Convenor of the working group : Dr. Ing. Achille Bonini (I)

A detailed report of the last meeting of the working group in Bolzano on May 10<sup>th</sup>, 2000 has been published in the last issue of **O.I.T.A.F.-NEWS**. The working group has

had another meeting in the meantime, held in Bolzano on October 2 and 3, 2000.

During that meeting most of the time had been taken up by the discussion of the draft amendment of „Chapter 1“.

Discussion of the other submissions, i.e. draft recommendation for the execution of permanent materials handling ropeways, draft recommendations for safety criteria and draft recommendation for the operation of materials handling ropeways (draft submitted by Hartmut Wohllaib) has been postponed till the next meeting.

The working group also decided to extend membership (direct members or corresponding members) to operators and users of this type of equipment.

Considering all the work which has been done so far in this field, we wish to express our full appreciation to the working group who have drafted the recommendation that has been issued in 1980 because in many a respect their recommendations have lost none of their validity to the day. In particular we wish to recall the merits of one of the most active members of the working group, Max Clayton, who has left us a short time ago, and who all along his life has been a convinced supporter of ropeways in general, and industrial ropeways in particular.

The next meeting of the working group has been scheduled to take place on January 22 and 23, 2001 in Sulz (Vorarlberg) in Austria in Mr. Andersag's office.

### **Committee n° 2: Characteristics and inspection of ropes**

Chairman : Prof. Dr. Ing. Enrico Bazzaro, Professor at the Politecnico di Milano

The committee convened for a meeting in Innsbruck on October 11, 2000 and was attended by the following members :

Prof. Dr. Ing. Bazzaro, chairman of the committee, Prof. Dr. Ing. Gabor Oplatka (ETH, Zürich) Pascal Tournier (technical manager of Meribel), Dr. Bernd Hinterdorfer (Technical University, Vienna, Ing. Bruno Longatti (Fatzner), Dipl. Ing. Helmuth Hübl (Teufelberger), Jean Yves Bertillot (Tefilunion), Dr. Ing. Giuliano Stabon (University of Trieste)

Priority in the committees's discussion has been given to the following items

- Non destructive testing of ropes
- Safety levels of track ropes

Working programme for a new definition of safety levels

As to non destructive testing of ropes and the possibility to use these tests to reduce safety factors of track ropes members of the committee addressed in particular the following issues

- Correlation between reliability of current non destructive tests and number of wires of track ropes
- Test conditions and interpretation of test results. Qualification of technicians
- Frequency of non destructive testing of ropes with a view to the possibility to assess and monitor the occurrence of any deterioration of the rope during the rope life till the time it is discarded and thus to predict exactly the time a rope ought to be discarded and frequency of non destructive testing that needs to be maintained to preserve safety despite a reduced safety factor. As for this it should be recalled that that the section of ropes diminishes with increasing tension of the rope even if the actual pulling force to which they are subjected does not change, and reduced section means acceleration of the corrosion induced process of deterioration of the rope despite the positive effect that may be achieved for instance by reducing bending stresses rope of windings on drums or the rope deflection on shoes.

The committee also decided to restrict discussions to closed coil track ropes and hence not to address „Herkules“ ropes which are almost out of use.

The committee had a long exchange of views on the present relevance of a reduced safety factor, its economic implications and implications for the future development of ropeways. In doing so they recalled that from a purely scientific point of view it should be borne on mind that whilst the process of deterioration of the rope and its progress no doubt varies with the order of magnitude of tension stresses, it also very much depends on the radius of the rope windings and deviations, corrosion, specific pressure of points of contact, manufacturing defects etc. Members of the committee also believe that a solution and a reply given to those who wish to reduce the safety factor by adopting a probabilistic „fail safe“ approach, for which the committee in its present composition has neither the necessary time, manning force nor

money to carry out and pay the high cost of the research that is fundamental for such an approach to the problem. The discussion has therefore shown that there is no really great interest to reduce the safety factor because the cost of the work involved is simply too high.

The committee therefore decided to consider closed for the time being the discussion of this issue and to tackle the other items listed in the work programme of the committee that has been published in the autumn issue of the **O.I.T.A.F.-NEWS** 1999. Accordingly the Chairman asked all members of the committee to let him have their proposals for the other subjects of the work programme by December 15, 2000

### **Committee n° 3: Electrical equipment and components of ropeway installations**

Chairman : Dipl. Ing. Ruedi Schüle, Swiss Federal Office for Transports

The committee had two meetings in the year 2000, i.e. the first one on March 29 to 31, 2000 in Bolzano (I) and the second on September 27 to 29, 2000 in Samnaun (CH). Readers will have found a short report of the meeting held in Bolzano in the spring issue of **O.I.T.A.F.-NEWS 2000**.

At present the composition of the committee is as follows : Ruedi Schüle (CH), Paul Christen (CH), Alex Kaufmann (CH), Fredy Lang (CH), Erich Megert (CH), Anton Huber (A), Ernst Rahnefeld (A), Helmut Wrba (A), Helmut Imlauer (A), Monsieur Bonzon (F), Marcel Félice (F), Günter Karl (D), Wilfried Teichmann (D), Siegmund Mättig (D) to be succeeded by Johann Disl, Gabriele Capello (I), Andrea Fornasa (I), Carlo Ragazzi (I)

It is a rule in this committee to have first, as first item of the agenda, an exchange of information on latest accidents and disorders of ropeways and to move thereafter to the other items of the agenda. In both meetings of the year 2000 the committee examined the following subjects

#### **Signalling and recording of disorders and operating conditions.**

It has become apparent from an exchange of information around the table that only Italy has issued a binding regulation to equip all ropeways and funiculars, except fixed grip

chairlifts, with a status and fault monitoring system. The recording device is expected to store at least 16 different informations and keep them stored for at least 6 months for supervisory authorities to be able to see and check them. Neither Switzerland, Austria, France or Germany have so far imposed an equivalent binding regulation. That notwithstanding some operators have decided to install these monitoring systems on a number of ropeway installations.

At their meeting in Samnaun the committee discussed once again this subject matter and has taken the following decision :

Seen that the contemplated device is not a simple recorder of events members have agreed to call it for the time being data recording system and refer to the acronym DAS (from the German word **DatenAufzeichnungSystem**).

The principles laid down by the committee and applicable for the time being are as follows :

- DAS is an aid and not a safety device
- It shall meet the operator's requirements
- DAS is expected to display processed status data and store them in an appropriate manner
- Uptime may be continuous or limited in time to the time in service, type of operation (normal or emergency run), be dedicated to a given control system (manual or automatic control, controls actuated from the carrier, etc)
- DAS is expected to be operator friendly
- DAS is expected to be construed according to the principles of an open system for data imports, exports and „handling“
- DAS may be used in lieu of service manuals or log books.

Members also had a short discussion of minimum requirements for data that ought to be stored and have agreed to go into the depth of this issue at future meetings.

#### **The use of stored-program controls and complex electronic systems.**

Requirements for stored program controls and their use vary from one country to another. For instance:

French regulations require ropeways to be equipped with two SPC installed in parallel or with one type tested SPC, the software being developed according to the IEC quality plan and provided with emergency stops made up of two channels.

Italy requires ropeways to be equipped with two SPC and a third cut off channel, the so-called C channel containing the most important monitoring devices. Requirements also specify that the execution of channel and devices must conform to the traditional technical principles of execution. However, the new regulations, which have not yet been enforced, now open the possibility to adopt alternative solutions, the minimum requirement being however always to install a SPC and the so-called channel C

Austrian regulations are similar i.e. they admit the solution with a single conventional SPC channel and a second conventional cut off channel (emergency – safety circuit)

In Switzerland and Germany all SPC that have a safety function must be type tested devices.

#### **Committee n° 4: Legal, administrative, economic and statistical matters.**

Chairman : Dr. Horst Kühschelm, Austrian Federal Ministry for Transport, Technology and Innovation.

At their last meeting held in Nizza on October 19 and 20, 2000 the committee addressed the following subjects:

##### **Responsibility and liability of ropeway operators and ski-run owners:**

Report submitted by Frau Dr. Helga Wagner, VDS (D)

The report submitted by Frau Dr. Helga Wagner, who is a lawyer and working for the Verband Deutscher Seilbahnen (German Ropeway Association) on the „Responsibility and Liability of Ropeway Operators and Ski-run Owners“ acquires utmost and extremely sad momentum in the light of the tragic accidents of the year 2000.

With two countries having not yet submitted a complete report, Mrs . Wagner's reports was but an interim appraisal of the situation in respect of the following aspects:

- Legal basis of liability of ropeway operators
- Comparison of regulations for the personal injury and property damage liability insurance
- Liability of ropeway operators for damage arising from avalanches, storm or any other cause of damage
- Liability in respect of own staff
- Legal basis of liability of ski-run owners

- Liability for the safety of ski-runs – risks that involve the ski-run owner's responsibility
- Liability for accidents brought about by ski-trail groomers or snowmobiles
- Liability for ski racing runs, snow-making, transportation of alcohol addicts etc
- Right to close a ski run

The main purpose aimed at by this questionnaire is to collect information about and then compare the legal basis of liability and regulations introduced by Alpine countries and having achieved that to see whether approximation of regulations is possible. There is good hope to finalize the enquiry and have the final report translated before the end of the year so as to publish it in the ***O.I.T.A.F.-NEWS***

Tense discussion of the above subjects has shown that it is necessary to call for answers on liabilities resulting from tourist activities in summer, such as mountain biking or trekking. Further thought needs to be given to the above subjects before the next meeting scheduled to take place in Martigny / CH on April 30 and May 1<sup>st</sup>, 2001 in order to identify subjects that need to be dealt with at greater depth

##### **Transport conditions:**

The committee touched this issue at the last meeting yet not discussed it because of lack of time.

Moving another item of the agenda the chairman of the committee submitted a brief progress report on the activities of the working group on „Environment“.

Before bringing the meeting to a close the chairman called upon national delegations to present situation reports on the summer season 2000 and latest events.

##### **Working group „ENVIRONMENT FORUM“** set up by committee n°. 4

Convenor of the working group:

Techn. Rat Dipl. Ing. Dir. Michael Manhart  
Lech am Arlberg.

The working group convened for a meeting in Paris on June 8 and 9, 2000

The meeting addressed the following items of the agenda.

Application of article 13 of the protocol on Tourism relative to individual transport and the access to ski areas.

First conclusions drawn from the discussion are as follows:

- ski resorts have devised their own local solutions, such as for instance bus service from the hotels to the ski area, or as in some places the so-called ski trains; yet the car is still the main means of transport
- there is no general solution possible and local problems must be tackled locally.

Members agreed to pick up again this subject at future meetings.

Research project on snowmaking additives

The working group were given reports on different research projects that are being run at present, some of them with the participation of universities. The working group intend to discuss final results when available and submit a draft proposal to the of the Executive and Management Committees of O.I.T.A.F. as well as the International Federation of Ropeway Operators, FIANET.

### **Committee n° 6: Optimisation of ropeway and skitow operation**

Chairman: Ing. Francis Crouzet

The last meeting of the committee took place at Landsberg/Lech on September 29, 2000.

The committee is composed of the following members : Egon Espen (A), Manfred Specek (A), Hannes Steinlechner (A), Wolfgang Bosch (D), Wolfgang Dieter Feix (D), Josef Seidl (D), Manel Salsas (E), Michel Granier (F), Hervé Petit (F), Pier Giorgio Graziano (I), Mauro Joyeusaz (I), Giuseppe Sciallis (I), Fritz Mayer (CH), Jan Bøen (N).

11 members attended the last meeting of the committee. The former secretary of the committee, Alain Soury Lavergne, is no longer sitting on this committee, seen that in the meantime he has been appointed consultant of EU committees who are in charge of supporting CEN standards of the EU Directive relating to cableway installations. We wish him the best for his new field of activity.

We are grateful to Michel Granier for accepting to step in as secretary of the committee. Egon Espen will take care, as in the past, of the German translation.

Remote control of ropeway installations is no doubt one of the most important issues to be discussed by the committee.

At their last meeting the committee discussed a French document on starting operations of installations with an unattended return station.

The actual meaning of the term „remote control“ having been clarified, the members of the committee were then asked to comment and explain their national regulations. The committee thus learned that for instance Austria has issued strict regulations on the sequence of steps and procedures to be followed by operators, France has no general regulation. Members then discussed the advantage of using a video based monitoring system, in particular advantages deriving thereof for the ropeway operator. Members felt that the first thing to do is to define exactly the function of the remote control and having done so to draft appropriate recommendations, quite conscious of the fact that remote control ought to be regarded as a means to achieve a higher degree of safety than the one achieved by men. With other words video and acoustic aid are expected to help men to see and hear.

To conclude the chairman suggested the following title for the recommendation the committee intends to draft:

„Recommendation for specifications for remote control systems intended as an aid for starting operations of ropeway installations with one unattended station“.

Members drew up the following first draft summary of the recommendation to be discussed at the next meeting:

1. Scope
2. General
3. Function of the remote control
4. Quality requirements to be met by remote control systems

An additional bit of information on matters related to our profession

### **PEOPLE WHO HAVE RETIRED FROM ACTIVE LIFE:**



**Dipl Ing. Rudolf Starnberger**

On November 1<sup>st</sup>. 2000 Dipl. Ing. Rudolf Starnberger went into his well-deserved and well-earned retirement. Rudolf Starnberger has been a student of „General mechanical engineering“ at the Technical University of Vienna and took his final exams in 1965. He made his first practical experience while working for the company Semperit and then as technical assistant of the Technical Research and Testing Institute of the Technical University in Vienna throughout the years 1967 to 1973. This is where he had his first contacts with the ropeway industry while testing ropeway components and making type tests of new components or approval tests of installations. In 1973 he took up service with the Federal Ministry for Transports as their expert in matters related to ropeways. On January 1<sup>st</sup>, 1986 he was appointed assistant head of department, in 1992 he was appointed head of the section II/73 and thereafter its off-spring the administrative section „Ropeway Affairs“ and in 1997 deputy head of the department „Ropeway Installations Section Engineering“:

Dipl. Ing. Starnberger did not restrict his field of activity to the remit which had been entrusted to him by the Federal Ministry but has also accepted to chair the working group „Steel Wire Ropes“ and the working group „Safety of Ropeway Installations“ set up by the Austrian Standards Institute and as such made a valuable contribution to the profession. He accepted to deliver technical lectures on ropeway safety to national and international groups and thus made a valuable contribution to ropeway safety. He was internationally known as an excellent expert in matters related to ropeways and was in the position to make his valuable contribution to international efforts aiming at an improvement of safety levels.

He was appointed convenor of CEN TC 242 working group B and as such worked with success and produced standard 2 – General Requirements – Part 1 : General Requirements for all Ropeway Installations and Part 2 - Complementary Requirements for Bicable reversible aerial ropeways without track rope brake“ as well as standard 3 : Calculations. Owing to his indestructible calmness he was able to convince member countries to compromise on their contrasting views and accept the necessary compromise solutions.

Calm, yet decided, which permitted him to achieve positive results and by indicating clear guidelines cut down lengthy discussions. We are sure he will continue to be with us by attending meetings of CEN TC 242 and help us with his advise and positive action.

Starnberger is an unforgettable name in another context. Indeed he has made an essential contribution to the drafting of the European Directive related to cableway installations intended to carry persons. The proposals he and Dr. Kühschelm have made have opened the way to a breakthrough and the acceptance by countries that are topmost in terms of importance of their ropeway industry.

He stands out for the clarity of his views and contributions made to the exchange of information that takes place at the international meetings of ropeway supervisory authorities (ITTAB), the last of which, the one organized at Mayrhofen in Austria, he had accepted to chair and has, may be thus performed his last official function.

Ad multos annos lieber Rudolf

This year another known personality has taken his retirement



**Dipl. Ing. Wolfgang Allgeuer**

Wolfgang Allgeuer was head of department on Ropeway Installations of the regional Government of Vorarlberg, who is a member of O.I.T.A.F. We wonder whether in our profession there is someone who did not know Wolfgang Allgeuer.

Having taken up service with the department Ropeway and Lift Engineering of the regional Government of Vorarlberg on January 1<sup>st</sup>, 1968 he has examined innumerable projects

for the construction of ski-tows and fixed grip chairlifts and issued many an official agreement. His traditional openness for new aspects led him to devote great interest to all problems related to ropeway systems and to commit himself to their solution. At annual meetings of the Austrian regional ropeway experts he has always tried to make best use of the acquired knowledge and spared no efforts to promote the adoption of a uniform system of interpretation and application of regulations. He made essential contribution to the elaboration of ski-tow and chairlift regulations.

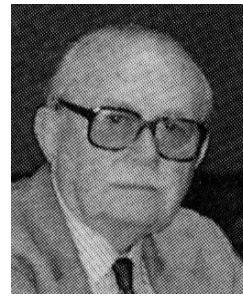
The O.I.T.A.F. working group „Ski-tows“ which he chaired from 1988 to 1992 and the working group „Non public ropeways“ which he chaired from 1993 to 1998 have carried out a highly efficient activity under his guidance and have produced the following O.I.T.A.F. recommendations:

- International recommendations for the construction and operation of ski-tows (edition 1996).
- Recommendations for the construction and operation of non public ropeways for passenger transportation and material handling – reversible ropeway systems (edition 1996).
- Technical recommendation for the construction and operation of material handling ropeways designed to carry useful loads up to 2000 kg.

➤ The excellency of the work done by the working groups under the guidance of Wolfgang Allgeuer is proven by the fact that the working group's recommendations for ski-runs have been taken over, almost word by word, in CEN standards and their recommendations for reversible ropeways designed to carry persons have been adopted by Switzerland and Austria in their national regulations, while the region of Alto Adige decided to include the working group's recommendations for material handling ropeways designed to carry useful loads up to 2000 kg into their own regional regulations.

Wolfgang Allgeuer will leave a lasting memory in the recollection of O.I.T.A.F members and we would like to thank him for his commitment.

Ad multos annos dear Wolfgang



**Max Clayton**

is no longer.

An old member of O.I.T.A.F. Max Clayton died on September 12, 2000 in London at the age of 86.

As one of the participants attending the 1<sup>st</sup> International Conference on Transportation by Rope Max Clayton gave his full support to the resolutions and final vote on the establishment of O.I.T.A.F. He was assigned missions of responsibility and fully aware of the importance of his assignments he endeavoured to offer his contribution either as chairman or member of the readers' committee of all international conferences organized ever since 1957, except the last one in San Francisco. He was of Polish origin he has come to England during the last war and committed himself passionately to the interests of the ropeway industry. He offered his efficient personal contribution to the elaboration of the first O.I.T.A.F. guidelines and definition of the fundamental elements of the organisation's future structure and life. He has been elected vice-president of O.I.T.A.F. for the period 1962 to 1965 and then made member of the Management Committee, first with the mandate to represent IARM, and later on as representative of individual members. Till the end of his membership in the year 1993 he spared no efforts to defend the interests of material handling ropeways. He accepted to draw up the first draft for the „Recommendations for the construction and operation of material handling ropeways and cable cranes“. recommendations which after 20 years have lost none of their original validity and may be regarded as recommendations that establish an ideal equilibrium between quality and quantity. At the time O.I.T.A.F. tackled on of the most fundamental issues, i.e. ropes, he established and developed contacts with European test houses and controlling authorities. His international prestige and personal experience made him to the ideal middleman between the European and

American ropeway communities and co-founder of the O.I.T.A.F. / NACS. He was also the "liaison officer" between O.I.T.A.F. and OIPEEC in charge of the contacts that have been established to facilitate the exchange of information on the results of research projects on the fatigue of steel wire ropes, as well as to promote joint research projects. During the four years of his term of office as President of OIPEEC his profitable activity and his excellent international contacts brought about results of even greater utility. High sensibility, temperament, professional precision, reliability and modesty were the outstanding characteristic features of the person and his activity. We shall never forget that he let us have the gift of his character and personality.

In 1990 the General Meeting of O.I.T.A.F. held in Lugano, grateful for his long-lasting commitment made him honorary member of O.I.T.A.F.

We will treasure his memory.

## INTERNATIONAL INFORMATION

**ITTAB** (International Meeting of Supervisory Authorities)



Ever since 1951 supervisory authorities regularly meet for their annual meeting. As against the first meeting in 1951 with only four supervisory authorities attending, i.e. the French, Austrian, Bavarian and Swiss supervisory authority, joined in 1952 by the Italian supervisory authority, this year the Federal Ministry for Transport, Innovation and Technology had the great honour to welcome to the 50<sup>th</sup> meeting in Mayrhofen in the Zillertal in Tirol delegations from 12 European countries, Japan and 2 States of the U.S.A. After so many decades the meeting was attended

for the first time by representatives of the Ministries of Poland and Slovenia.

It was a three days meeting from September 26 to 28 with a rather heavy programme and agenda.

These meetings are regularly convened with the purpose to facilitate an open exchange of information on accidents, technical development and consequent amendments of national regulations and achieve, by so doing, a progressive improvement of safety standards at a possibly uniform high level.

Meetings are hosted in turn, without having to observe strict internal rules, by the most important countries for their number of ropeway installations.

This time participants were given a warm welcome and led through the meeting by the head of the Austrian supervisory authority, Dipl. Ing. Rudolf Starnberger.

Five working sessions have been foreseen with enough time to cover the three most important items of the agenda. On one afternoon participants were taken to the Penkenbahn.

Most of the time of the working sessions has been taken up by submitted reports on accidents. These reports show once again that alike the situation in past years ropeway installation that require the active collaboration of passengers, i.e. ski-tows and fixed grip chairlifts, have had the highest number of accidents with the highest number of injured passengers. Luckily enough only in few cases injured passengers had to be recovered quite a long time in hospital or had suffered lasting consequences of the accident. That notwithstanding appropriate technical solutions have been taken and service conditions changed to reduce the number of accidents. Unfortunately, despite existing regulations on the protection against accidents at work the record of bad accidents at work is rather high.

Discussion of technical questions has been foreseen in the second part of the meeting's agenda. The meeting addressed the following technical questions

### Number of grips of unidirectional bicable aerial ropeways.

The question put to the meeting was to know what delegates believe to be the capacity of carriers that have to be fitted with two grips considering that the stand adopted in national regulations vary from one country to another

and that CEN TC 242 in their draft standard on carriers specify an upper limit for the number of passengers carried by carriers fitted with one grip only. During the discussion that followed participants were given the opportunity to explain the reasons which had led them to adopt their national regulations. It is felt that a decision will have to be taken by CEN.

#### Automatic operation of funiculars.

Many countries are faced by an increasing number of applications of a permit to install automatically operated unattended funiculars so as to reduce the cost of operation. The discussion has shown that some countries have not yet issued regulations for unattended operation of funicular, some other contemplate the possibility to adopt appropriate regulations and lay down conditions that need to be met should they contemplate the possibility to authorise automatic operation.

#### Transport of the latest generation of downhill gliders on chairlift.

It has been observed that an increasing number of new downhill gliders are used on downhill ski-trails. And hence the question arises to know whether chairlifts designed to carry passengers wearing skis are fit to transport passengers with downhill gliders. As to this, participants had rather differing views seen that admission or non admission of these passengers very much depends on the layout of the loading and unloading areas. Some countries apply the rules applicable to pedestrians, seen that these passengers do not stand on skis.

#### Combined hold-down and support sheave assemblies.

Participants had a lively exchange of information regarding their experience with this type of sheave assemblies, in particular with regard to the spacing of sheaves and were thus able to learn that there are only minor differences between national regulations

#### Importance of destructive rope tests

It is a question of concern to all ropes of a ropeway, haulage ropes, track ropes, tension ropes, carrying-hauling ropes. The discussion has shown that only the three Nordic countries do not require this test to be carried out.

#### Technical contribution thought as an additional bit of information.

The last contribution was given by Prof. Oplatka. He showed a videofilm of deropement tests with a new design of rope-catchers which Prof. Oplatka called the "central rope catcher". Participants were shown pictures of several deropements showing the positive effect of the „central rope catcher“. The discussion that followed has shown that this presentation has been met with great interest.

The social events that have been organized offered participants ample opportunities to establish new or cultivate existing contacts with other participants. On their visit to the Penkenbahn participants were given another demonstration of the warmth of the Austrian hospitality and the technical skill of ropeway manufacturers.

A farewell ceremony has been organized at the end of the meeting for participants to take leave with all honours from an old hand, **Prof. Gabor Oplatka**, who is about to take his well-earned retirement after having regularly attended these international meetings. His scientific contributions and discussions have always been of highest interest and welcome to participants. His analysis of accident made people sit up. Dear Gabor, in future we are going to miss your contributions. Ad multos annos

#### **CEN Standards**

The last meeting of CEN TC 242 took place in Paris on November 30 and December 1<sup>st</sup>, 2000. The President of CEN TC 242, Monsieur Fougea chaired the meeting assisted by the Secretary, Mrs. Geslin. Mrs. Martinez Arriola attended the meetings as representative of the EU Commission, Monsieur Legrand as representative of the CEN Management Center and Monsieur Simiand as representative of O.I.T.A.F.

Monsieur Fougea bid the welcome to 20 members of the Technical Committee representing Germany, Finland, France, the United Kingdom, Italy, Norway, Austria, Switzerland and Spain.

The most important items of the agenda were the following ones

### Work programme.

Monsieur Legrand informed the committee that Monsieur Soury Lavergne has been entrusted the remit to assess the consistency of all standards for safety requirements for passenger transportation by rope and their conformity with the European Directive for cableway installations intended to carry persons as well as with the mandate CEN was given by the European Commission.

A. Soury Lavergne has served for 22 years the French Association of Ropeway Operators, SNTF, as technical director of the association and has hence the necessary experience to assess the conformity of the standards. Members approved this decision with cheers and applause to express their satisfaction about the choice of a ropeway expert all of them knew very well.

President Fougea and the Secretariat of the CEN TC 242 instructed by Mme Geslin have drawn up a time-table and the work programme of the Technical Committee and its working groups and a plan of the remaining stages of the outstanding work, such as the CEN enquiry, discussion of comments arising from the enquiry by the responsible working groups, discussion of the draft standard in the Technical Committee 242, submission of draft standards to the Editing committee thereafter submission to another enquiry to give members an opportunity to assess the consistency of all standards. Considering the time needed to cover all these stages the committee set themselves the target date second half year 2004 for the final approval of the standards.

### Exchange of views on fire protection of ropeway installations.

The Technical Committee felt that after the terrible accident in Austria they ought to exchange views on this issue. They had a brief discussion and agreed to postpone the decision to set up a working group with the remit to address this issue till the next meeting hoping that by then an expert group set up in Austria on fire protection of funiculars travelling on a track that passes through a tunnel might have completed their mission.

Approval of prEN 13107 Civil engineering works

Discussion of the draft standard.

The decision to approve prEN 13107 and to release the draft standard for formal vote was moved by a majority vote.

### Working group on electromagnetic compatibility.

Seen that in the meantime member countries have appointed their delegate the first meeting of the working group is scheduled to take place in January 2001.

### CEN guidelines for environmental aspects

The TC decided to invite working groups who are still discussing a draft that has not yet passed the CEN enquiry stage to cover in their standards the environmental aspects listed below:

Waste of resources, energy consumption, emissions into the air, emissions into water, waste, noise, migration of hazardous substances, factors affecting the soil. environmental hazards resulting from accidents or abuse.

The next two meetings of the committee are scheduled to take place, the first in June 2001 in Berne (CH) and the second in London in October 2001.

### OIPEEC

Last September OIPEEC held a Technical Meeting hosted by the University of Mining and Metallurgy at the University of Krakow in Poland. The topic of the meeting was the Non-destructive testing of rope. The meeting was very well attended, by delegates from all over the world, and was the stimulation for much discussion on the various key issues of concern in the use of NDT

Next August OIPEEC will be holding its 4-yearly Round Table meeting at the ATLSS Center, Lehigh University, Bethlehem, Pennsylvania, USA on 20<sup>th</sup> – 22<sup>nd</sup> August 2001.

The theme of the Round Table will be

### Rope Termination and Fittings

The focus of the meeting will be studies of the effects on rope endurance caused by the mechanical performance of rope terminations and other fittings. These issues are of relevance to the safe operation of rope in a very wide range of applications. The complete range of static and dynamic termination devices is to be reviewed, and also the interaction between rope and other devices. There will be two full days of technical papers, plus a laboratory tour. The Round Table is open to

members and to non members, and papers are invited from both groups.

### **A ropeway spanning across the strait of Messina.**

Recently we learned of a project which let us sit up and will no doubt cause sensation. Among the various solutions that have so far been taken into consideration as a possible connection between Sicily and the Italian mainland there is a project of a bicable reversible aerial ropeway spanning across the strait of Messina to serve only as a means of transportation of tourists. This shows once more that bicable reversible aerial ropeways, besides their usual application as uphill and downhill means of transportation in the mountains offer a solution to cross a strait and connect two countries. It is a solution which has been suggested 15 years ago by Prof. D'Armini, who, by the way, had been elected first president of O.I.T.A.F. and performed this function till 1971 and was then made honorary member of O.I.T.A.F. He not only suggested the solution but had already made a feasibility study of a project which has now been picked up as possible solution.

Technical data of the project

Length of the central span: 3 400 m

Length of spans on either side of the central span

on the mainland: 675 m

on the island: 750 m

height of the two towers

on the mainland: 325 m

on the island: 335 m

capacity: approx. 1000 persons/h

Estimated cost (1999): approx. 80.000 million Lira (41 530 000 EURO)

### **Two books on the history of ropeways in the world.**

Hans Dieter Schmoll, a journalist most of us will know, has undertaken to collect documents on the history of ropeways and has now, after many years of work, published a history in two volumes.

In his history which contains many pictures and illustration and many an amusing passage H.D. Schmoll goes as far back as the year 250 B.C. to show not only what is supposed to be the first ropeway ever built and then tell the development of ropeways throughout centuries till to-day without forgetting some fanciful projects that have been built but once. In the second volume he de-

scribes recent development trends and thus presents to the reader an all-round description that covers the development from the first timid steps till the latest state of the art of the different ropeway systems.

In his preface to this history Prof. Oplatka stressed the importance and the high merits of the work H.D. Schmoll has done to preserve what evidence we still have of the past. We wish to express our full appreciation and thank H.D. Schmoll for presenting us his history of ropeways of the world.

Order for both volumes may be sent to  
Ottmar F. Steidl GesmbH

Vertrieb

P.O. Box 38

**Kirchenstrasse 25**

A – 5301 SALZBURG / Eugendorf

Price

Volume I            22 Euro + 4 Euro postage

Volume II           22 Euro + 4 Euro postage

Volume I + II      39 Euro + 4 Euro postage

### **Project of a data bank for the literature on ropeways.**

The Institut für Mechanische Systeme, Bereich Seilbahntechnik (former Institut für Leichtbau und Seilbahntechnik) of the Technical University, ETH, Zurich, owned an important collection, some 15000 documents in different languages on **Ropes and Ropeways** which has now been passed to the ETH to complete its library for people to consult.

A reference list of the 5000 most important documents – for instance articles published in technical magazines, books, proceeds of international conferences, standards, brochures, communications, patent letters and so-called grey literature, i.e. reports that have not been published except of course, confidential documents - has been drawn up in joint work carried out with the ETH library and stored in a **data bank** with the following Internet address : <http://chembib-CLICAPS.ethz.ch/SB-home.htm>. It is thus possible to research in the catalogue and to use to this end either key words, the author's name, year of publication, name of the magazine or the language of the publication and retrieve a list of available documents with their abstract. Users may also use Internet to order a copy of the integral text or borrow a book. Access to the data bank is free of charge. The price charged for copies and the

fee for borrowing is the standard price of the ETH library (to be found in the list published on the Internet page.

**Administrative and handling expenses** are covered by supporting companies and institutions (partners to the project) The list of project partners (which is still open for additional partnerships) and the direct call of their start page are shown on the internet page of the data bank. Partners to the project are being regularly kept up to date on the development of the data bank. Communications to and comments on the data bank are welcome and may be sent to the following e-mail address [info.ropeway@library.ethz.ch](mailto:info.ropeway@library.ethz.ch) or to the following postal address:

Dr. Rudolf Mumenthaler, ETH-Bibliothek, Rämistrasse 101, CH-8092 Zurich

#### **DATES TO BE REMEMBERED**

O.I.T.A.F. meetings in the year 2001

Management committee	25.05
Executive committee	26.03
Committee n° 1	19/20.03
Working group of committee 1	22/23.01
Committee n° 2	15.02
Committee n° 3	12/14.03
Committee n° 4	30.04/01.05
Working group Environment	09.02
Committee n° 6	19/20.01 18.05 and 05.10

O.I.T.A.F. Seminar : period 11 to 13.10

ALPITEC in Bolzano : 11 to 13. 10

#### **O.I.T.A.F. on INTERNET**

The access to files is restricted to O.I.T.A.F. members

O.I.T.A.F. members have now the possibility to retrieve directly

*The Technical Recommendations of O.I.T.A.F* as well as all papers O.I.T.A.F. committees have produced over the past years. Have a try. In addition you may now retrieve any time the last issue of **O.I.T.A.F.-NEWS**. All you need to do is to enter the password that has been posted to you.

General

Access to the German, English, French, Italian or Spanish version of the O.I.T.A.F. homepage is obtained by entering the address ><http://www.oitaf.org><. The home page provides the following information on O.I.T.A.F.

- What is O.I.T.A.F.
- Structure of O.I.T.A.F.
- O.I.T.A.F. statutes

- Activities of O.I.T.A.F.
  - NEWS and other information on O.I.T.A.F.
  - **O.I.T.A.F.-NEWS**
  - O.I.T.A.F. bodies and their members
  - O.I.T.A.F. committees
  - Technical recommendations, papers and statistical surveys produced by O.I.T.A.F.
  - Lectures delivered to O.I.T.A.F. Seminars
  - O.I.T.A.F. Seminars
- For further information use e-mail contact >[info@oitaf.org](mailto:info@oitaf.org)<

Publisher's imprint

O.I.T.A.F. Secretariat

I-39100 BOLZANO, Palazzo Provinciale 3B – via Crispi, 10

tel.: ++39-0471-414600

fax: ++39-0471-414616

e-mail: [H.Brugger@provincia.bz.it](mailto:H.Brugger@provincia.bz.it)

or [info@oitaf.org](mailto:info@oitaf.org)

Text and photographs if not specified otherwise by Secretary General of O.I.T.A.F.