



ORGANISATION SCIENTIFIQUE
ET TECHNIQUE INTERNATIONALE DU VOL 'A VOILE
- O.S.T.I.V. -
INTERNATIONAL SCIENTIFIC AND TECHNICAL
ORGANISATION FOR GLIDING
(Affiliated Member of the Fédération Aéronautique Internationale,
F.A.I.)

President: L.M.M. Boermans

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REPORT ON THE ACTIVITIES OF THE INTERNATIONAL SCIENTIFIC
AND TECHNICAL ORGANISATION FOR SOARING FLIGHT (OSTIV)
for the period October 2007 to October 2008.
Loek M.M. Boermans, President of OSTIV.

XXIX OSTIV Congress

The main event of the reporting period was the **XXIX OSTIV Congress**, held from 6 to 13 August 2008 in Lüsse, Germany, at the site of the 30th World Gliding Championships 2008.

At the **Opening Ceremony** of the Congress, in the townhall of Belzig, the following Awards were presented:

- The **OSTIV Plaque with Klemperer Award** was awarded to Prof. Dr. J. Gedeon for "his numerous noteworthy and path breaking contributions to the technology improvement of sailplanes and development of soaring over the past 50 years".
- The **OSTIV Prize** was awarded to P. Kousal for "his outstanding engagement, leading to improved crashworthiness requirements in the European Certification Specifications CS-22".
- The **OSTIV Special Prize** was awarded to the late Dipl.-Ing. B. Stender and to Dr.-Ing. O. Heise for "their significant contributions to the early development of fiberglass-reinforced-plastic sailplanes, especially the innovative and since then universally-used tongue-fork-wing-connection".
- The **OSTIV Diploma** for the best technical paper was given to Dipl.-Ing. J. Schwochow for his paper presented at the Motorless Flight Symposium in Varese, Italy, October 2004, titled "Aeroelasticity in Sailplane Design".
- The **OSTIV Diploma** for the best meteorological paper was given to Dipl.-Ing. B.A. Sigrist for his paper presented at the XXVIII OSTIV Congress in Eskilstuna, Sweden, 2006, titled "Use of topographic radar scans to identify thermal hotspots in Alpine areas".
- The **OSTIV Special Recognition** was given to B. Smith, Prof. Dr. M. D. Maughmer and Prof. Dr. E. Hindman for "their great efforts to catch up the publication scheme of OSTIV 's International Journal of Technical Soaring".
- The **OSTIV Special Recognition** was given to Dipl.-Ing. Ph. Stabenau for "the development and management of the excellent OSTIV Website, the medium of publication vital for OSTIV".

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The keynote lecture titled: „Gliding research – An important incubator for the entire aviation” was presented by Prof. Dr.-Ing. J. Thorbeck, Institut für Luft- und Raumfahrt of the TU Berlin.

During the next 5 days of the **Congress**, nearly 50 papers of good quality were presented on aerodynamics, flight mechanics, design and development, materials, instruments, flutter, airworthiness requirements, crashworthiness of cockpits, rescue systems, convection, lee-waves and meteorological predictions. After review they will be published in the forthcoming quarterly issues of OSTIV’s International Journal of **Technical Soaring**.

At the **General Conference**, on the last day of the Congress, the Board was re-elected with the following mutations: Dr.-Ing. M. Rehmet resigned, and the new Chairman of the Sailplane Development Panel Dipl.-Ing. H. Fendt and Dr. Ing. L. Popelka were elected as Board Members.

Dr.-Ing. M. Rehmet was unanimously appointed as Honorary Member of OSTIV in recognition of all the work he did as Chairman of the Sailplane Development Panel during a period of nine years.

The Board of OSTIV announced two new developments in view of the future:

- a gradual development toward “going on line” with the International Journal of Technical Soaring as an extra service to our members,
- installation of a small commission chaired by Prof. Dr. M. Maughmer, aimed to increase OSTIV’s membership.

At the **Closing Dinner** the President of OSTIV expressed sincere thanks to the Director of the World Gliding Championships mr. H. Märtin and the President of the Gliding Commission of the German Aeroclub (DAeC) mr. K. Klossok for the facilities offered, to the OSTIV’s Local Representative Dr. C. Lindemann and his wife Helga for their preparations and arrangements, and to Britta Schlenker for her indispensable help, which resulted in a Congress running smoothly.

Panel meetings

In **2007** the annual meetings of the **Sailplane Development Panel (SDP)** and **Training and Safety Panel (TSP)** took place from 1 to 3 November at Delft University of Technology in the Netherlands. The first two days the panels met separately, and on the third day they had a joint meeting.

At the **Sailplane Development Panel** meeting Dr. Rehmet announced his retirement as chairman of the SDP and gave an overview about SDP’s work during the 9 years of his chairmanship. He proposed Helmut Fendt, former chairman of the JAR-22 Studygroup, to be his successor, and the SDP accepted this change in chairmanship unanimously.

Many items were on the agenda of the 3 days meeting, e.g: jet engine powered gliders, airbrakes - pros and cons of L/D 1:5, Cockpit Damage Report, new concepts for crashworthy cockpits, weak link strength and loads at winch launch and aerotows, landing gear requirements, and cooperation of EASA and OSTIV.

Two presentations were offered by guests: Prof. Dal Monte from Rome gave a presentation on a new concept of a safety cockpit for gliders based on his experience with race boats and race cars, and Prof. Domenico Coiro gave a presentation of his work at the University of Napoli.

EASA followed again OSTIV's standing invitation to send observers to the SDP meetings, and EASA's Initial Airworthiness Rulemaking Officer and the PCM General Aviation joined the meeting and participated in the discussions in a dedicated manner.

At the **Training and Safety Panel meeting**, chaired by Ian Oldaker, representatives of Denmark, Sweden, Belgium, UK, Germany, Switzerland, USA, Netherlands, Canada and Austria presented their safety reports and discussed the safety audits in their countries. Experience with simulators in Sweden, UK and Denmark is positive; they are used for basic instruction, instructor courses and even aerobatic training. But feedback of stick forces is needed to get the real feel. A study on winch launching safety in UK was discussed. The work on the draft "Standard Operating Procedures" was debated; it was concluded that – similar to the OSTIVAS airworthiness requirements - a document is needed with a set of recommended procedures, and details possibly to be controlled by the local organisations. The current document will be amended accordingly. The TO Operations of EGU R. Danewid supports the work and will be invited to the next TSP meeting; the formal appointment will strengthen the bonds between TSP and the EGU.

At the **joint meeting of the SDP and TSP** several items, affecting both panels, were discussed: i.e. the issue of short field landings over high obstacles and the pros and cons of L/D 1/5, weak links for aerotow and winch launch, concepts for crashworthy cockpits and cockpit layout and ergonomics. Promotion of the "Cockpit Damage Report" (CDR) forms was on the agenda; the forms will be translated into French. Pilots demand "single lever engine controls" but at short term, since the existing motorgliders cannot easily be changed, mental training on the ground was regarded to be very important, starting with emergency exit and going to training of engine operation on the ground. Finally, experience with microlights for aerotow was exchanged.

The **SDP Crashworthiness Subcommittee**, chaired by Petr Kousal, had a workshop meeting on February 27th / 28th 2007 in Braunschweig, drafting the "Cockpit Crashworthiness NPA 2007-12" according to the "Terms of Reference", set by EASA Rulemaking. The tight timeframe could be complied with. The NPA was published on ESA's website soon after that, and the comments received were responded during a further workshop in Braunschweig in spring 2008. Publication of the amended CS-22 is expected in September 2008.

In **2008 the Sailplane Development Panel**, chaired by Dipl.-Ing H. Fendt, had its annual meeting during the days before the OSTIV Congress, from 4 and 5 August 2008 in Lüsse, Germany. Again, several presentations were given, followed by discussions: i.e. about crashworthiness and human tolerances, implementation of Formula one racing car's safety in sailplane cockpits, amendment on CS-22 landing gear requirements, status of Cockpit Damage Reports, fire protection in powered gliders, the "spine shell" to support pilot's comfort, transponder and ADS-B developments, and status of CS-22, NPA 2007-12.

Next meeting of the Sailplane Development Panel will be on 15 and 16 October 2009 in Germany at the Wasserkuppe or in Braunschweig, and the next meeting of the Training and Safety Panel will be in 2009 as well.

The **Meteorological Panel (MP)**, chaired by Dr. Hermann Trimmel, decided to have no formal meeting in 2008 since many members participated in the OSTIV Congress where one whole day was devoted to meteorology. The review process of the new edition of the "Handbook of Meteorological Forecasting for Soaring Flight" is finished and the World Meteorological Organization (WMO) will print and publish it as a "Technical Note" titled "Weather forecasting for soaring flight".

Next meeting of the Meteorological Panel is scheduled for 25 – 27 September 2009 in Vienna, Austria.