

**Minutes of the Transport Stresses Working Group of the
Committee for European Environmental Engineering Societies
Held on 30th September 1997 at the Schlosshotel in Karlsruhe**

Present at the Meeting of the Transportation Stresses Working Group (TSWG) were;

Mr K. Ahlin	SEES
Dr. U. Braunmiller	GUS
Mr. M. Dumelin	SSEE
Mr E. Furrer	SSEE
Mr H. Jansen	PLOT
Mr. M. Juntunen	SEEF
Mr L. Kushel	GUS
Mr. D. Richards	SEE (Chairman)
Mr J. Seller	SEE
Dr K. Ziegahn	GUS

Matters Arising

The meeting welcomed Mr Lutz Kushel from GUS and Mr Harro Jansen from PLOT. Apologies were received from Mr T. Trost, Dr P. Dehombreux and Mr. R. Finger.

A list of TSWG members, including corresponding members, was circulated. This list is attached to the minutes as Attachment No 1.

An error in the minutes of the previous meeting was noted. The topic headed CEN TC 261 Working Group 4 should have read CEN TC 261 Subcommittee 4. Also CEN TC 261 WG1 should have read CEN TC 261 SC1 WG4.

Systematisation of Measurement Methodologies

A number of aspects were addressed under this heading.

CEN TC 261 SC 1 WG4. (Minimisation of Packaging Waste - Management) Thomas Trost sent a report on the progress of this working group through Ulrich Braunmiller. Thomas indicated that whilst, this working group which had been “sleeping” for some time, it had been re-activated earlier this year. All 8 test methods and schedules are now complete (see copy of vu-foil at Attachment No 2). These had been sent to ISO around a year ago but a response is still awaited.

CEN TC 261 SG4. (Minimisation of Packaging Waste - Test Methods and Schedules) Dr Karl Ziegahn reported that drafts of five proposals (see minutes of last meeting) had been sent to the EU. The response to these had been that they did not fulfil the requirements of the commission. This was largely because the proposals could not be used discriminators to ensure a minimum waste package design. It is likely that least re-usability would not be accepted. Karl considered that a consequence of this rejection is the likely emphasis on Source Reduction (i.e. minimise package size). In Karl’s opinion this would increase the requirement for transportation data.

CEN TC 320 (Transport Quality). Dr Karl Ziegahn reported that at the next meeting of CEN TC 320 (scheduled for 14th October in Denmark) work on a new item would commence. This item was “Environmental Performance in the Transportation Chain”. Whilst, the environment meant was the “green” one, Karl felt that some aspects of the work may useful to the TSWG. In particular it was intended to include a check list on safety and environmental burdens. Karl thought that the way this was present could also be used by the TSWG to present our form of environmental information. At the meeting Karl circulated a document entitled “Environmental Safety Handbook for Road Transportation” This was intended to be used by Hauliers to define their ability to meet certain environmental standards.

DIN 30787. Ed Furrer reported that work was still in progress on this standard. He said that the April meeting to address this standard was postponed until November. Ulrich said that whilst there was little to report on this standard a considerable amount of work had been completed by Ed Furrer.

CEN TC104. Kjell Ahlin followed up a report he had made at the Paris meeting of the TSWG concerning the links between IEC 721 (Environmental classes) and IEC 68 (Test procedures). Kjell said that the Paulo Alto meeting had been successful. It is likely that the secretariat would be confirmed as Sweden and the chairman Ed Aoki of Hewlet Packard. The meeting had confirmed 9 working groups to complete on-going work these are listed in copies of the vu-foil included as Attachment No 3. Kjell said four new items were proposed at the meeting these included obtaining updated dynamic data. He expanded the description of this topic which is likely to defining and agreed method for dynamic data processing. Kjell said that the chairs for these tasks had still to be agreed but it was possible that he would chair the group responsible for dynamic data processing. Karl Ziegahn suggested the possibility that the TSWG could act as a support group to the IEC work. The chairman took an action to put such a proposal to Ed Aoki. It was also suggested that another CEEES workshop, say latter next year, may be beneficial to this end.

SRETS. Ulrich Braunmiller gave a brief presentation of the progress of the SRETS work programme. He said that the three year programme was half way through. Tasks 1, 2 and 3 were now complete and tasks 4 and 5 recently started. The mid term meeting was planned for November.

Technical Papers

Bibliography The original bibliography was distributed to the various societies some time ago. Thomas Trost had previously offered to collate any new references relating to transportation stresses. Ed Furrer supplied a list of new references and Karl suggested that the CEEES workshop papers be included. A general action on members was repeated.

Action. A general action was placed to submit any new references to transportation stresses to Thomas Trost. **All Members**

Monograph on Round Robin Methodologies. The chairman stated that he had received several requests for copies of the draft of this document in recent months. As such he felt it would be advantageous to circulate the final document as soon as possible. The chairman said that extracts from “Mechanical Environment Test Specification Development Method” had been included instead of the previous papers from Christian Lalanne. Also a more suitable paper from Darrel Charles was included. The chairman said that after a few minor modifications the Monograph would require a review prior to publication. Ed Furrer agreed to review the monograph, although it was agreed that, because the document is a collection of existing papers, changes were not really possible.

Chairmans notes: At the following days full CEEES meeting it was agreed to publish the monograph as a CEEES documents. The SEE was agreed as the society responsible for publishing and Ed Furrer as the reviewer.

Mil Std 810F. Markku Juntunen said that he had received a copy of Mil Std 810F for comment at the IES meeting. A short discussion took place on this. It was suggested that the best approach was to comment directly to the US authors.

Recent Publications. Several recent (and one not so recent) publications were discussed. These were;

Shaker Simulation of Random Vibration with a High Kurtosis. By Dr Steinwolf published in the (May/June 1997) Journal of Institute of Environmental Sciences. The chairman said that he had mentioned the technique presented in this paper at a previous meeting. It is an interesting method of simulating transportation vibrations and shocks.

The origin of the composite Wheeled Vehicle, Two-Wheeled Trailer and Tracked Vehicle Vibration Schedules in Mil std 810D/E. by Skip Connon published in the (March/April 1997) Journal of Institute of Environmental Sciences. This presents one of the methods used to derive data for the Mil

Std. As far as the author was aware this paper was the first time a widely circulated paper had been published on this topic.

A Modern Technique of Transportation Simulation for Package Performance Testing. By M.A Sek published in Packaging Technology and Science (Vol 9 P327-343 1996). This paper was introduced by Ed Furrer.

Vibration on the Platforms of various Utility Transport Vehicles by W. Hoppe and J. Gerock published in various publications circa 1976. The data in this paper had been in various standards as such it was a useful reference. A discussion ensued on the of the validity (or more specifically the lack of validity) of this data.

A Performance Study of Two Portable Data Recorders Used to Measure Package Drop Height by Daum, Marcedones, Russel and Cornell. The chairman said he had circulated this paper to the majority of TSWG members before the meeting but if anybody wanted a copy they should contact him.

Round Robin Exercise

The chairman circulated nine copies of the Round Robin Data. This comprised four magnetic discs generated as a result of discussions at the last meeting.

The chairman said that each disc contained one data record comprising 440000 samples representing 352 s of data at a spacing of 0.8 ms. The four data files contain progressively more complicated information. An information sheet on the exercise was supplied to members and a slightly updated version is included here as Attachment 4. **It was agreed that the target date for completion of the exercise would be the next meeting (Mid February 1998).** The chairman said he would supply all members of the TSWG would were not in attendance with a copy of the data. Further copies may be made or requested from the chairman.

Action. The members agreed to recruited additional participants from their individual societies.
All Members

Thematic Network.

The concept of a thematic network had been discussed extensively at the previous meeting. Thematic network funding is intended to permit co-ordination of applicable research and facilitate the interchange of technology and know how. In practice this means the costs associated with meetings, translations etc. However, thematic network funding does not fund the research itself.

The chairman reported that submitting a proposal for a thematic had been pursued since the last meeting. A draft proposal had been generated, but before it could be circulated, the call for proposals had been withdrawn. The chairman suggested that the proposal, as it currently exists, should be circulated to TSWG members. He asked them to comment on this and to indicate whether they would wish to participate in any thematic network.

Action. The members to comment on the draft proposal and indicate whether they wish to participate. **All Members**

Chairmans Note: It is now understood that the EU are suggesting the submission of full proposals for thematic networks by the end of 1997. To this end responses to the above action are required urgently.

Presentations

Kjell Ahlin presented some recent work he had been involved with to quantify the vibrations experienced within buildings due to traffic and machinery. Copies of the vu-foils he used in this presentation are included as Attachment 5. The purpose of the exercise was to quantify the conditions at sites for mobile phone groundstations. In total some 500 sites were surveyed and Kjell observed that the results were quite to those

in IEC 721. The analysis techniques Kjell used in this work was relatively similar to certain techniques used for the assessment of vehicle vibrations and the presentation resulted in some discussion.

Harro Jansen made a brief presentation on the work of PLOT with regard transportation stresses. The chairman said he would supply Harro with information on previous work. However, the chairman said he no longer had a copy of the Bibliography and that Harro would need to contact Thomas Trost to obtain a copy.

Markku Juntunen presented an update of an environmental assessment programme been undertaken by the Finnish Society. Markku also raised the matter of a draft Recommended Practices on Shock and Vibration Transducer Selection he had received at the May meeting of the IES. The author of that document had asked whether anybody knew of any European manufacturers of velocity transducers (responses to Markku please). A copy of the draft working practices will be circulated to TSWG members.

Any Other Business

The members had no items of business not raised in the meeting.

Next Meeting

The date of the next meeting of the TSWG, in Brussels, is still to be announced.

Attachments

1. Names and Addresses of TSWG Members
2. Vu-foils of CEN TC261 presentation
3. Vu-foils of CEN TC104 presentation
4. Objectives of the round robin exercise
5. Vu-foils of presentation by Kjell Ahlin on vibration in buildings

Distribution

Mr K. Ahlin	
Mr M. Belotti	Plus Round Robin data Discs
Dr. U. Braunmiller	
Mr. M. Dumelin	
Dr P. Dehombreux	Plus Round Robin data Discs
Mr. R. Finger	Plus Round Robin data Discs
Mr. E. Furrer	
Mr T Geise	Plus Round Robin data Discs
Mr. T. Hell	Plus Round Robin data Discs
Mr K. Janousky	Plus Round Robin data Discs
Mr H. Jansen	
Mr. M. Juntunen	
Mr C. Karsberg	Plus Round Robin data Discs
Mr L. Kushel	
Mr. C. Lalanne	Plus Round Robin data Discs
Mr J. Moriceau	Plus Round Robin data Discs
Mr. D. Richards	
Mr G. Ruding	Plus Round Robin data Discs
Mr J. Seller	
Mr T. Schreiber	Plus Round Robin data Discs
Mr H. Torstensson	
Mr. T. Trost	Plus Round Robin data Discs
Mr. B. Wouters	Plus Round Robin data Discs
Dr. K. Ziegahn	
plus CEEES Secretariate	

Attachment 1
Names and Addresses of TSWG Members

Attachment 2
Vu-Foils of CEN TC261 Presentation

Attachment 3
Vu-Foils Of CEN TC104 Presentation

Attachment 4
Objectives Of The Round Robin Exercise

Attachment 5
Vu-Foils Of Presentation By Kjell Ahlin On Vibration In Building