



ISO/TC 108/SC 2 N 538

REPLACES: ISO/TC 108/SC 2 N 536

ISO/TC 108/SC 2

Measurement and evaluation of mechanical vibration and shock as applied to machines, vehicles and structures

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Secretariat: DIN

Report of the 24th meeting, Berlin 2007-04-23/27

Date of document	2007-07-26
Expected action	Info

Background

Dear Sir or Madam,

Please find overleaf the Report of the 24th meeting of ISO/TC 108/SC 2.

Due to a comment we amended the text under item 13 and corrected the list of participants.

Best regards,

Dieter Hansen



**Report
on the 24th meeting of ISO/TC 108/SC 2 "Mechanical vibration and shock —
measurement and evaluation of mechanical vibration and shock as applied to
machines, vehicles and structures" on 2007-04-23 and 27, in Berlin, Germany**

1. Opening of the meeting (2007-04-23, 13:30 h)

The chairman, Mr Alf Olsson, welcomed the delegates.

2. Roll call of delegates

The roll call was made and the heads of delegation identified themselves, see [Annex 1](#).

3. Adoption of the draft agenda

The draft agenda, doc 108/2 N 531, was adopted. The chairman proposed to consider the change of the title of SC 2 to reflect the new title and scope of TC 108 and to discuss it at the second plenary meeting under item 17 (Any other business).

4. Appointment of the drafting committee

The resolution committee was established to consist of Mr McGuire, the chairman and the secretary.

**5. Review of the resolutions and report of the 23rd meeting of ISO/TC 108/SC 2 on
2005-08-29 and 2005-09-02, Mississauga, Canada**

The secretary informed the delegates that no written comments were submitted to the report of the last meeting, therefore the report was approved. The resolutions will be addressed with the secretariat's report under the next item of the agenda.

6. Report of the Secretariat on the activities of ISO/TC 108/SC 2

The secretary referred to the report, doc. 108/2 N 530. Since the last meeting the following changes in membership were recorded:

- Denmark changed from P- to O-member,
- two new O-members were included:
 - Hong Kong and South Africa,
- "Serbia and Montenegro" changed the name to become Serbia.

Two dates were corrected. The following standards were under systematic review but no final decisions were taken by the secretariat:

- ISO 7919-1, ISO 7919-2, ISO 7919-3, ISO 8002, ISO 10055, ISO 10056, ISO 10815 and ISO 10816-2.

Therefore, the final plenary meeting should take decisions about confirmation, revision or withdrawal of these standards.

Regarding item 7 of the report it was reported that Resolutions 10/2005 and 13/2005 need final decisions regarding the convenors of WG 3 and 16.

Since the last meeting of SC 2 three standards were published:

- ISO 14837-1, ISO 14839-3 and ISO 20283-3.

Additionally, two draft standards were circulated for voting:

- DIS 10816-7 and DIS 20283-2.

The chairman reported that the secretary of IEC/TC 4, Mr R. Arseneault, had informed him that the convenor of JWG 1, Mr M. Crahan, had resigned. However, TC 4 has great interest to continue the work of the joint group on the revision of ISO 10816-5 and will try to propose a new convenor.

Note of the secretariat: A proposal for a new convenor has been received from the IEC/TC 4 secretariat and a meeting of JWG 1 in Vancouver, Canada, in Sept. 2007 is under consideration.

7. Reports of working groups having met the week before in Prague (16 to 20 April 2007); Decisions on related documents

7.1. WG 1 – Vibration of machines (will be presented at 2nd plenary meeting)

(Note of the secretariat: The following report of WG 1 was presented at the second plenary meeting.)

The convenor of WG 1, Mr McGuire, reported on the results of the meeting which was held in Prague the preceding week. Three new work item proposals had been approved before the meeting, on the revision of ISO 7919-4 and ISO 10816-4 and on a new item on torsional vibration of rotating machinery (WI 22266). The WG discussed specifically the comments submitted with the votes of member bodies. The two parts were revised and should be circulated as second CD for approval. Simultaneously, the revised ISO/CD 7919-2 and ISO/CD 10816-2 should be circulated as well in order to ensure consistency between all four standards.

Resolution 3/2007 was taken.

The WG discussed the modifications for ISO 7919-3 and ISO 10816-3 to achieve consistency with the expected ISO 10816-7 on pumps. It was recommended to publish the two modified parts 3 simultaneously with the new part 7.

Resolution 4/2007 was taken.

A second CD 22266-1 on Torsional vibration of rotating machinery, land-based steam turbine generator sets, should be circulated for approval.

Resolution 5/2007 was taken.

The project for a Technical Report on methodology for selecting appropriate vibration standards (TR 19201) was addressed. The comments received on the draft will be considered and a text will be submitted to the secretariat at the end of October for circulation to SC 2 members for approval.

Resolution 6/2007 was taken.

7.2. WG 7 – Vibration of machines with active magnetic bearings

On behalf of the convenor, the chairman reported an extract from the minutes of the meeting of WG 7 which was held in Prague the preceding week. After publication of the parts 1 to 3 on vibration of rotating machinery equipped with active magnetic bearings a fourth part on technical guidelines was considered and proposed as preliminary work item.

Resolution 1/2007 was taken.

7.3. WG 10 – Basic techniques for vibration diagnostics

On behalf of the convenor, the chairman reported on the result of the WG 10 meeting which was held in Prague the preceding week. The WG discussed an ambitious plan for ISO 13373-3 on basic techniques for diagnostics. It was proposed to confirm this project as PWI.

Resolution 13/2007 was taken.

8. Review of the meeting schedule

The meeting schedule was reviewed and confirmed.

----- Adjournment of the meeting until 2007-04-27 -----

9. Reopening of the meeting (2007-04-27, 10:30 h)

The meeting was reopened on 2007-04-27 at 10:30 h.

10. Reports of working groups; Decisions on related documents

10.2. WG 2 – Vibration of ships

On behalf of the convenor, Mr Taddeo reported that the WG discussed ISO/PWI 20283-4 on Guidelines for the measurement and evaluation of ship propulsion machinery vibration. The discussion took place on the draft provided by the Swiss and German experts of the group. The group agreed on the principle structure of the document. The different parts of the propulsion machinery were addressed and experts were asked to contribute to the open points regarding the different components, e.g. by giving appropriate references to other standards. This new draft is expected to be circulated in November 2007.

The group noted that ISO/DIS 20283-2 was circulated for voting by 2007-08-05.

10.3. WG 3 – Vibration of stationary structures

Mr Tantawy reported that the main task of WG 3 was the discussion of the revision of ISO 4866 including its amendments. The project was approved as an active item in May 2006. The WG endeavoured to take into consideration the demand of users, specifically to provide typical values for different sources. Members were asked to contribute data material and references.

Resolution 7/2007 was taken.

The WG noted the various activities of other groups and committees, specifically the work of WG 8 on a standard series on ground-borne noise and vibration from rail systems (ISO 14837), and two projects of ISO/TC 98, "Bases for design of structures". It was found that ISO/DIS 10137, "Serviceability of buildings and walkways against vibration", was a general document referring primarily to other standards, also of TC 108.

The WG addressed the existing standards ISO 10815 and ISO 14964. Since ISO 10815 was under review but no final recommendation of the secretariat was given, WG 3 recommended to confirm the standard at the time being.

It was noted with regret that the long-standing convenor, Mr Bryan Skipp, was not able to continue the convenorship. Therefore, the group proposed to appoint Mr T. Tantawy as new convenor.

Resolution 8/2007 was taken.

10.4. WG 8 – Groundborne noise and vibration from rail systems

On behalf of the convenor, Mr Groß reported that the WG discussed the standards series ISO 14837, "Ground-borne noise and vibration arising from rail systems – Part 1, General guidance", was published in 2005. A proposed part 6 on asset management will not be pursued as a stand alone part. Since part 3 on Measurement was planned with a very broad scope it was now considered to develop the different sections as Technical Specifications or Reports. This has the advantage to offer methods for which consensus is not expected yet. The remaining parts should be kept as PWI in the work programme.

The WG also reviewed ISO 10815 and found that it has a different scope to ISO 14837. Therefore there were no objections to confirm the standard. The next meeting will be held in September in Munich.

10.5. WG 16 – Vibration and shock resistance of sensitive equipment

Mr Olsson reported with regret that the convenor of WG 16, Mr Kjell Ahlin, had resigned. He reported that he convened the meeting and that the group reviewed the resolutions of the last meeting in Canada. As result of the meeting it was confirmed that ISO/TS 10811-1 and –2 should be transformed into standards.

Resolutions 9/2007 and 10/2007 were taken.

11. Standards which were due for five yearly review; Decision on confirmation, revision or withdrawal

- 11.1. ISO 7919-1:1996 "Mechanical vibration of non-reciprocating machines — Measurements on rotating shafts and evaluation criteria — Part 1: General guidelines"
- 11.2. ISO 7919-2:2001 "Mechanical vibration — Evaluation of machine vibration by measurements on rotating shafts — Part 2: Land-based steam turbines and generators in excess of 50 MW with normal operating speeds of 1500 r/min, 1800 r/min, 3000 r/min and 3600 r/min"
- 11.3. ISO 7919-3:1996 "Mechanical vibration of non-reciprocating machines — Measurements on rotating shafts and evaluation criteria — Part 3: Coupled industrial machines"
- 11.4. ISO 8002:1986 "Mechanical vibrations — Land vehicles — Method for reporting measured data"
- 11.5. ISO 10055:1996 "Mechanical vibration — Vibration testing requirements for shipboard equipment and machinery components"
- 11.6. ISO 10056:2001 "Mechanical vibration — Measurement and analysis of whole-body vibration to which passengers and crew are exposed in railway vehicles"
- 11.7. ISO 10815:1996 "Mechanical vibration — Measurement of vibration generated internally in railway tunnels by the passage of trains"
- 11.8. ISO 10816-2:2001 "Mechanical vibration — Evaluation of machine vibration by measurements on non-rotating parts — Part 2: Land-based steam turbines and generators in excess of 50 MW with normal operating speeds of 1500 r/min, 1800 r/min, 3000 r/min and 3600 r/min"

All standards listed under this item were confirmed. It was noted that revision work is in progress for ISO 7919-2, -3 and ISO 10816-2. A revision is expected for ISO 10055 and ISO 10815 as soon as appropriate material is available. ISO 10056 was offered to SC 4 for future review and revision.

Resolutions 11/2007 and 12/2007 were taken.

12. Review of preliminary work items

- 12.1. PWI 13373-3 "Condition monitoring and diagnostics of machines — Vibration condition monitoring — Part 3: Basic techniques for diagnostics"
- 12.2. PWI 14837-2 "Mechanical vibration — Ground-borne noise and vibration arising from rail systems — Part 2: Prediction models"
- 12.3. PWI 14837-3 "Mechanical vibration — Ground-borne noise and vibration arising from rail systems — Part 3: Measurement"
- 12.4. PWI 14837-4 "Mechanical vibration — Ground-borne noise and vibration arising from rail systems — Part 4: Evaluation criteria"
- 12.5. PWI 14837-5 "Mechanical vibration — Ground-borne noise and vibration arising from rail systems — Part 5: Mitigation"
- 12.6. PWI 14837-6 "Mechanical vibration — Ground-borne noise and vibration arising from rail systems — Part 6: Asset management"
- 12.7. PWI 17472 "Human subjective assessment of vibration and noise onboard ships"
- 12.8. PWI 19201 "Introduction and overview about machinery vibration standards"
- 12.9. PWI 20283-1 "Mechanical vibration — Measurement of vibration on ships — Part 1: General guidelines"
- 12.10. PWI 20283-4 "Mechanical vibration — Measurement of vibration on ships — Part 4: Guidelines for the measurement and evaluation of ship propulsion machinery vibration"

All items were confirmed except PWI 14837-6 as reported under item 10.3, and PWI 19201, as this project was approved to become a Technical Report, see Resolution 6/2007.

Resolution 13/2007 was taken.

13. Review of liaisons with other committees and organizations

The liaisons were reviewed according to the list, doc N 516. Mr Tantawy was included as liaison officer for ISO/TC 98.

Mr Nielsen, Secretary of SC 3, reported on the new work item proposal on the revision of ISO 2954 which was transferred by SC 2 to SC 3 following the Canada meeting. He pointed at the problem that a justified request for a project was not approved by member bodies, since the minimum number of members willing to participate actively according to the ISO requirements for NWIP was not achieved. SC 3 decided to try to get more support. It was also mentioned that there is lack of detailed requirements from WG 10 of SC 2 regarding the project for an instrumentation for vibration condition monitoring of machines (PWI 13377).

It was emphasized that member organizations should ensure proper consultation on national level in order to achieve the best solutions for related projects in different subcommittees.

14. Work items on which no progress is being made – Status and action to be taken (work items at risk of being cancelled by ISO/CS within next 12 months)

No remarks.

15. Items for future work

Future work was addressed under the specific agenda items. No additional formal proposal was tabled.

16. Requirements concerning a subsequent meeting

Since no invitation was offered at the time being, the chairman asked the convenors to call for WG meetings in the meantime.

17. Any other business

Following the information given at the first plenary meeting and discussions besides the WG meetings the chairman proposed a change of the title of SC 2 as follows:

"Mechanical vibration, shock and vibration condition monitoring of machines, vehicles and structures".

This should be proposed to TC 108 for approval. The TC 108 chairman, Mr B. Douglas, replied that an integrating approach is pursued by SC 5 and therefore it is important to cooperate closely between the subcommittees.

Resolution 14/2007 was taken.

Since the term of reference of the SC 2 chairman will be terminated at the end of 2007, the secretary proposed to nominate him for further period of three years.

Resolution 15/2007 was taken.

18. Approval of resolutions

The resolutions were approved as given in doc. N 532.

19. Closing of the meeting

With thanks to the delegates for their contributions and to the host, DIN, Mr Olsson closed the meeting.

List of Participants

**24th meeting of ISO/TC 108/SC 2
on 2007-04-23 and 2007-04-27
DIN, Berlin, Germany**

Chairman **Alf Olsson**
Sweden

Secretary **Dieter Hansen**
Germany

country	name, first name	Head of Delegation	opening plenary	closing plenary
<u>China</u>	He, Zhengjia	X	X	X
<u>Czech Republic</u>	Makovička, Daniel	X	X	
<u>France</u>	Tantawy, Talaat	X	X	X
<u>Germany</u>	Groß, Thomas		X	X
<u>Japan</u>	Ono, Kyosuke	X	X	
	Shuri, Hideyuki	X		X
<u>Korea</u>	Kim, Byung-Hyun	X	X	X
	Kim, Kwang-Joon		X	X
<u>South Africa</u>	Veldman, Ian	X	X	
<u>United Kingdom</u>	Armstrong, Martin		X	X
	Gross, Mike		X	X
	Herbert, Rob			X
	McGuire, Mike	X		X
	Parrish, Geoff		X	
<u>USA</u>	Madigosky, Walter			X
	Schmid, Charles			X
	Taddeo, Richard	X	X	X
<u>ISO/TC 108</u>	Blaeser, Susan		X	X
	Douglas, Bruce (Chairman)		X	X
<u>ISO/TC 108/SC 3</u>	Nielsen, Leif			X