

**REPORT ON THE MEETINGS OF COMMISSION VIII
(Health, Safety and Environment)
Held on July 7-9, 2008
at Congress Graz, Austria**

(Note: All referenced IIW documents are available through the CCIW).

1. Welcome, introductions and administration announcements.

The meeting began at 8:40am with introductions from the 20 delegates from a variety of countries. It was important to note that Lincoln Electric had 3 delegates, 1 from ESAB and 1 from Air Liquide.

The chairman commented that the agenda was revised recently to note that on Wednesday, the joint meeting with Commission XII will not take place and instead the joint meeting will be with Commission II.

2. Adoption of agenda.

The agenda was approved.

3. Approval of the minutes of the meeting in Gliwice **(Doc. VIII – 2070-08)**

The minutes of the last meeting were approved.

4. Matters arising from the minutes and not covered in the agenda:

a. List of welding related standards **(Doc. VIII – 2079-08)**

The chair developed this list and asked for its approval. He noted that the name of this Commission was recently changed to include "Environment".

The chair wanted to include regional standards in this list as well. Everyone agreed with this approach....the writer of this report made the Commission aware that in Canada we also have a standard that should be listed here. This information will be passed on to the chair of this work from Sweden.

b. Report on the voting procedure for ISO Technical Reports

The chair commented that it has been difficult in the past to get votes from some countries and this makes it difficult to move work forward with this lack of support. The chair will look into this moving forward...NOTE: Canada did not vote on the last two documents. Due to different individuals attending this group in past years, this might have caused this problem in Canada.

c. Date and place for the future meetings (delegates are kindly requested to make a proposal)

Due to the location of the next meeting in Singapore, the chair was wondering if two intermediate meetings should be held this year (in lieu of one as normal) as he thought several European delegates may not be able to travel to Singapore next July. However, after discussion it was decided to have just one intermediate meeting as most delegates indicated their intention to attend Singapore.

5. National reports.

There was a quick report from the French and Japanese delegates. Nothing of significance to Canada to report.

6. Development of welding fume regulation in the Netherlands (V. Van deer Mee)

A report was presented giving a summary of regulations in the Netherlands. The conclusion was that the regulations vary depending on the codes in question and the how the fumes are measured. However, 1 mg/m³ will be the new threshold value in the Netherlands, effective 2010. The industry in the Netherlands have asked for a transition plan on best practices to help them to meet this new standard level which is felt very difficult for industry to implement.

7. Discussion and development of a Commission VIII paper on Nitrogen Oxides (V. Spiegel-Ciobanu, **Doc. VIII – 2072-08**)

A short overview report was presented on the amount of nitrogen oxides in different welding and cutting processes. It was agreed to forward this report for publication by IIW in "*Welding in the World*".

8. Presentation of the paper "The effect of welding on lung function decline and respiratory symptoms: a systematic review." (introduction by W. Zschiesche due to absence of the author)

A report was presented as identified above. It was noted that 30ml of lung Volume (measured as Vital Capacity) is lost per year from general aging. This is negatively affected by welding but also how you measure the air flow (fast or slow breathing in and out). It was also noted that humans have 4-5L of volume in capacity.

9. Presentation of preliminary results of the German research on Ultrafine particles (V. Spiegel-Ciobanu)

The author began her presentation with an announcement that they were able to finalize the results and thus this presentation will include these numbers. A number of welding processes were investigated in this work.

The highest mass emission rates are generated with MIG of AlMg alloys, during EB welding in atmosphere and during MAG welding with filler wire without shielding gas, and with self shielding filler wire.

The meeting finished at 12:30AM.

July 8th

The second day started at 8:30AM with opening the floor for questions on the last presentation of the first day.

10. Updated report on the results of the Econweld project:

The chair gave a brief overview of this EU funded project and in particular four work packages within the overall project

a. Demonstration of the ventilated helmet (L. Costa)

This still needs work as the air flow and weight are still concerns that need to be worked on.

b. Results of tests on welding fumes (**Doc. VIII – 2073-08**, J. Matusiak)

More information will be presented on this tomorrow.

c. Brief demonstration of other results (L. Costa).

Because the overall work on this EU project is still in process, more information will be given once this work is completed.

11. Presentation of results of the research activities "The welder as a strategic resource in shipbuilding" (**Docs. 2074-08 and 2075-08**, R. Boeckholt)

The presenter of this activity talked about how a group of over 50 individuals from the EU, Australia, and Japan are looking at the resource issue of keeping welders in this industry.

Based on the large numbers of welders who are taking leave due to back, neck, and arm pain, this working group is looking at things like gun handle design. There was a discussion about what has been put in place in Australia within the ship building industry and it was felt that cooperation between WTIA (Australia), Commission VIII and this working group is warranted.

12. Development of the ISO TR "Risk assessment in welding fabrication" (**Doc. VIII 2047r3 – 08**)

a. Introduction (L. Costa)

b. Detailed analysis of the available revision (C. Abert)

The chair commented that there is ISO 9000 and ISO 3834 for welding, ISO 14001 and the SC Environment document for welding but nothing on H&S. However, this

commission is developing H&S Checklist and H&S Risk Assessment guideline Technical Working documents.

C. Albert gave a presentation on the status of the referenced document. A Task Group was formed of 7 individuals to move this project forward.

13. Discussion on the matter of eye safety (based on a document prepared by G. McMillan)

The chair gave a brief introduction of the above article produced by the Commission VIII's former chair.

14. Administrative matters for commission II:

a. Terms of reference for the Commission

The Commission reviewed the terms of reference. Everyone was in agreement of the revised terms of reference (now include "Environment")

b. List of best practice documents

The Commission reviewed the list of best practice documents. The chair commented on a few references he would like to delete.

c. Management of documents deriving from SC-ENV

The chair gave a brief update on this Commission's responsibility for Environment which this Commission took over about one year ago. The chair suggested he will look into the adoption of the old Environmental documents in the List of Best Practice and look at giving them a Commission VIII number, if applicable.

d. Appointment of a leader for the Environment Issue.

The chair asked for volunteers to lead the Environment work. As there was none, the chair proposed that he would take on this role on an interim basis. Everyone agreed.

15. Date and places for the future meetings

Next meeting is in Hanover, Germany around the end of February 2009 followed by the Singapore meeting in July.

The chair will look into having a national seminar in Singapore next year.

The meeting finished at 12:15PM.

July 9th

Day 3 started at 9AM.

16. Preliminary introduction by the Chairmen.

17. Presentation on the ongoing research and legislative context in Austria (Host paper)

Unfortunately, the Austrian expert was unable to attend the meeting due to an illness. Therefore, the group moved to item 18.

18. Health and safety in fabrication and repair of welded components: aspects, impacts and compliance to regulations (**Doc VIII – 2078-08**, L. Costa).

This was a very good presentation on the topic described in the title.

Joint Meeting with Commission II

19. Development of fume extracting torches (GMAW):

- a. Innovative Australian Project (J. Norrish)
- b. Innovative European Project (Doc VIII – 2077-08, M. Marconi)

The chair of Commission VIII gave an overview of the European project (funded by the European Commission). It seems very interesting to draw the fume away at the source. He presented some statistics on the work to date

The inventor (from the University of Wollongong in Australia) of the Australian device was in the audience and provided his presentation on part (a) above (work funded by Linde/BOC). There are some difficulties with the device working for out of positions (however using a 15 degree lead angle does seem to help – FCAW seems to work even better). The shielding gas out of the gun is being analyzed with fluid dynamics to improve its efficiency. It seems like this works but the gun needs to be improved from an ergonomics perspective. They still need to review the amount of Nitrogen in the weld metal to ensure toughness is not affected. Lastly, the high noise of the extraction systems are something that still needs to be worked on.

20. Presentation of the paper "Electromagnetic fields in welding applications – the current and the conceivable future situation with regard to legal, technical and biological aspects of workers protection" (P. Mair)

The author stated that the implementation of EMF limits by the European government, with the deadline of 2004, was delayed for 4 years as many countries and industries were not ready. 2012 is the date for the revised EU Directive (2004/40/EC)

Meeting ended 12:30PM

Douglas R. Luciani
Delegate