

Meeting Minutes

ASCE/SEI Blast, Shock and Impact Committee
May 15, 2010, 8:30 – 11:30 am

Emerald 4, Gaylord Palms Hotel & Convention Center
6000 West Osceola Parkway
Kissimmee, FL 34746

Attendance:

Members

Shalva Marjanishvili, Chair, AE
Gary Consolazio
Robert Browning
Bradley W Foust
M A Saadeghvaziri
James Casper
Kris Clemente
John Puryear
Tyler Oesch
Alban Proietto

Friends of the Committee

Ahsan Kareem, Chair, Dynamic Effects TAC
Sharon Gallant
David Stevens
Paul Mlakar
W Gene Corley
Eric Williamson
Scot Wood
Tona Rodriguez-Nikl
Clay Naito
Jim Davidson
H. S. Lew
Robert Dinan
Vince Chiarito
Sarah Orton
Peggy Van Eepoel
James Baylot
Steve Smith
Lara Leininger
Mehrdad Sasani

Shalva Marjanishvili opened the meeting at 8:30am and following activities took place:

1. Introduction of committee members and visitors. Shalva Marjanishvili introduced everyone to the mission of the Committee: *“To study and evaluate the magnitude and effects of blast, shock and impulsive loadings (other than wind or seismic) on structures and their components, and to formulate design criteria and methods to provide adequate resistance or relief from their effects.”*

2. Approval of minutes of 2009 Structures Congress – the minutes were approved by the attending committee members
3. Shalva Marjanishvili stated that new member applicants who were present at the meeting will become members.
4. Report of Associate Editor and discussion paper reviews – Shalva Marjanishvili briefed the following on paper reviews by the Committee and handed out a brief summary:

A total of 6 papers were submitted, 1 paper was accepted, 3 papers were declined, 1 paper was recommended for re-review, and 1 paper was withdrawn.

Shalva Marjanishvili stated that since he became a Chair of the Committee it is appropriate to seek a replacement Associate Editor. Brief discussion took place and Dr. James Baylot volunteered to take the responsibility of an Associate Editor. Committee members agreed to nominate Dr. Baylot as an Associate Editor. It was noted that there is a new General Editor of the Journal. Shalva Marjanishvili will present Dr. Baylot's candidacy to the editorial board for approval.

5. H.S. Lew pointed out that this Committee should work closely with Blast Standards Committee. He noted the Blast, Shock and Impact Committee is a technical committee and produces white papers and various publications. These publications eventually need to be adopted and incorporated into Blast Standards by Blast Standards Committee. Brief discussion took place and Dr. Steve Smith volunteered to serve as a liaison between these two committees. Dr. Smith will also join Blast, Shock and Impact Committee.
6. Review of Technical Sessions 2010:

Consensus among all attendees was that there were too many presentations in 90min time interval. It was noted that there should be not more than 4 presentations in any one session. Paul Mlakar noted that there were twice more papers submitted than what was available and some of the good papers got inserted into existing sessions, bringing number of presentations in the sessions to five or six. James Baylot noted that this was the first time that there were 6 presentations in one session. It was unclear to Committee members whether sessions sponsored by Committees were given a preference. Paul Mlakar noted that it would be preferred if he is cc-ed on new session proposals submitted by the Committee. A brief discussion took place about session proposal submission process.

There were two blast related presentations which were not sponsored by this committee. Clay Naito noted that both presentations were well attended.

Two sessions sponsored by the Committee were: "*Design, Analysis and Testing of Blast Resistant Curtain Walls – non-structural*" and "*Design, Analysis and Field Testing of Blast Resistant Curtain Walls*". Both sessions were well attended by approximately 60 to 70 people. Two presentations

(visual slides) from DHS were not approved for public release by DHS and one presenter from DHS did not showed up. Two presentations, which were not approved by DHS were presented without visual slides. One missing presentation from DHS allowed more reasonable time for other presenters in the session (originally, there were 6 presentations scheduled in this session).

Paul Mlakar asked if this was a good idea to have joint ASCE/AISC conference. Attendees were split in their opinion. Brief discussion took place regarding number of participants in this conference. It was noted that generally, ASCE attracts about 1,200 participants, while AISC attracts about 3,000 participants. This congress had approximately 4,000 participants.

7. Discussion of topics for 2011 Structures Congress:

The deadline for session proposal submissions is June 14, 2010.

Eric Williamson suggested that this Committee and Committee of Bridge and Tunnel Security (chaired by Eric Williamson) jointly sponsor session regarding bridge design and analysis for blast loading. Lara Leininger volunteered to submit this session proposal.

Jimmy Baylot suggested that we propose "Blast tutorial" session. He also noted that in the past these sessions were well attended and incurred a lot of interest. However, recently ASCE tried to push this tutorial session into pre-conference training/seminars. Majority of Committee members agreed that these sessions belong to pre-conference training.

Eric Williamson suggested the topic regarding state of practice in blast design.

James Davidson suggested that this Committee and Structural Members committee submit a joint session proposals. He volunteered to act as a liaison between two committees.

8. Updates on Committee related reports

Paul Mlakar stated that he will email the current sale numbers of publications.

Paul Mlakar mentioned that ASCE Blast Standards are very close to be released for public comments and balloting and this will give a chance to Blast Committee members, who are not Blast Standards Committee members to voice their opinion. He estimated that this will happen in approximately 6 months. There were no attendees who were members of both, Blast, Shock and Impact and Blast standards Committee members. Steve Smith, who is members of Blast Standards Committee reiterated his interest in joining Blast, Shock and Impact Committee and to act as a liaison between these two committees.

9. Discussion on future publications, white papers and special journal papers:

John Puryear and Shalva Marjanishvili suggested that it might be of interest to write a white paper about anchor analysis and design subjected to air-blast and impulsive loading. It was noted that recent changes in Building Code, which requires the used on ACI-318, Appendix D,

puts burden on Blast design up to the degree that it becomes impossible for reasonable design. Furthermore ACI-318, Appendix D explicitly excludes air-blast and impact loads. Hence, air-blast professionals will benefit greatly if there is a consensus publication regarding anchor analysis and design. Eric Williamson noted that ACI 318, Appendix D assumes 5% low fracture strength value and this might be too low for very short duration events such as blast or impact. Eric Williamson also noted that there are some but not many publications about anchor testing for dynamic/impulsive loads.

It was suggested to produce a white paper regarding how to apply ACI-318, Appendix D to anchors subjected to blasts and impact loads. It was suggested that this publication should be produced jointly with ACI. Eric Williamson volunteered to act a liaison between ASCE and ACI. Eric Williamson volunteered his time in developing this document and Sharon Gallant volunteered her assistance.

A brief discussion took place regarding differences in publication processes between ASCE and ACI.

A sub-committee was formed to produce this publication. This sub-committee is headed by Sharon Gallant. Committee members and meeting attendees were encouraged to contact Sharon Gallant directly to offer their contributions.

There was a general interest in contributing to special blast edition of ASCE Journal of Structural Engineering, however no concrete actions were proposed.

10. Building Vibrations Committee discussion

Shalva Marjanishvili raised the question about Building Vibrations Committee and it was noted that the Committee name was changed from "Blast, Shock and Vibratory Effects" to "Blast Shock and Impact" because in the past, committee members expressed virtually no interest in building vibrations. James Baylot noted that he was unable to find enough professionals interested in forming this committee. However, he stated, that he will continue his search.

Ahsan Kareem (Chair, Dynamic Effects TAC), reiterated TAC's commitment to include Building Vibrations Committee and Multi-Hazard Committee to revitalize Dynamic Effects TAC.

Brief discussion took place and it was noted that there is very little guidance about acceptable vibration limits in structures and there might be a need for such a document. Some examples of vibration also were noted, such as off-shore platform vibrations. Vince Chiarito noted that there is a Modal Analysis Committee at ASME and offered his help to act as a liaison between ASCE and ASME.

11. Committee web-site

Gary Consolazio presented a printed copy of updated Committee website:
<http://bsveweb.ce.ufl.edu/>. Our website is hosted and will continue to be hosted by the University of Florida.

12. Other Committee activities

A brief discussion took place on a possible future blast-related workshop. However no concrete actions were taken.

13. Proposals for future Committee activities:

A brief discussion took place about other possible publications, such as aluminum framing, glazing and anchorage, point- and cable-supported windows, balance design was also mentioned. However, at this time, committee members felt that they have limited time to undertake another possible publication.

Steve Smith mentioned that there is need for determining and mitigating explosion effects in underground mines.

14. Other business and open discussion

None

15. Meeting was adjourned at 10:30am with the aim to reconvene in approximately 5min for meeting for *Subcommittee on Physical Security*

Meeting Minutes

Subcommittee on Physical Security
May 15, 2010, 10:40 – 11:30 am

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6000 West Osceola Parkway
Kissimmee, FL 34746

Attendance:

Members

Paul Mlakar
James Baylot

Friends of the Committee

Shalva Marjanishvili
James Casper
Bradley Faust
Peggy Van Eepoel
Tyler Oesch
John Puryear
Vince Chiarito
Robert Browning
Alban Proietto
David Stevens
Gary Consolazio
Eric Williamson

Shalva Marjanishvili opened the meeting at 10:40am and following activities took place:

1. Shalva Marjanishvili provided background for the sub-committee
2. Eric Williamson noted that there is a need for the book as a reference for educational as well professional purposes. He noted that relatively low priced paper-back book is very popular among students and provides an opportunity for young professionals and students to study blast.
3. Paul Mlakar noted that the sales of this book (published in 1999) are still strong, which indicates that this book is still popular and there might be a need for updated version. He also, summarized historic discussions about this book.
4. Eric Williamson noted that since new UFC 3-340-02 replaced older TM5-1300 with few updates, Structural Design for Physical Security should also be updated or rewritten. He also suggested

that new chapter be added. Namely, the analysis and design of bridge and tunnel structures to blast and impact would be beneficial. He also suggested to add infrastructure protection chapter.

5. Paul Mlakar raised the question regarding future audience of this book and suggested that the title of this book should also include "State of Practice". This suggestion was well received by committee members and visors.
6. James Baylot suggested that original chapters need to be rewritten. Brief discussion took place and it was agreed that new chapters should be rewritten by group of professionals (not original authors), while the efforts of the rewrite should be lead by original authors. Dr. Baylot will email table of contents of the book.
7. Eric Williamson suggested that we form an editorial committee of 3 people lead by original authors for each chapter.
8. Paul Mlakar volunteered to contact original authors regarding forming three-person committee for each chapter.
9. The meeting was adjourned at 11:30am