**Mission:** To disseminate and interpret information on the behavior and design of structural steel members, cold-formed to shape from flat materials, and to stimulate research and the publication of technical papers in this field of activity.

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**ASCE-SEI Committee on Cold-Formed Steel**
Thursday, 20 February 2003, 6:00 pm – 7:00pm
Friday, 21 February 2003, 7:00 am – 8:00 am
Orlando, FL

1) **Approval of Agenda/ Agenda Updates**
   approved

2) **Attendance**
   Thurs. session: 11 members and guests
   - **members:** Ben Schafer, Joe Wellinghoff, Tom Miller, Rob Madsen, Hani Salim, Jim Fisher, Tom Sputo
   - **guests:** Ed Kile, Gary Bennett, Nabil Rahman, Jay Larson,
   Fri. session: 9 members and guests
   - **members:** Ben Schafer, Joe Wellinghoff, Tom Miller, Rob Madsen, Hani Salim, Jim Fisher, Tom Sputo
   - **guests:** Ed Kile, Jay Larson, Nabil Rahman

3) **Approval of previous minutes**
   approved

4) **Opening Remarks**
   a) Report from the ASCE TAC-Metals
      Meeting was in Chicago in August. The TAC encourages special projects requests in the neighborhood of $10,000. Co-funding is considered attractive. Our level of activity is near the average for the other Metals subcommittees. Our efforts in recent years are recognized and encouraged by the TAC on Metals.

      The chair read an excerpt from the committee CFS annual report concerning the need for greater publicity regarding the current dearth of research funding despite (1) real needs, as identified by this an other committees, and (2) real growth in some segments of the cold-formed steel industry.

   b) Prioritization of our efforts for this meeting

5) **Old Business**
   a) 2002 CCFSS Conference – reviewed 6 papers
      The chair of the committee helped out with the paper reviews for the CCFSS conference held in Orlando last October. It was discussed that this committee may be able to help out more in the future. This idea will be forwarded on to Roger Laboube for his reaction.

   b) Cold-Formed Steel Book Review for JSE – Nov. ‘02
      Some nice feedback has been received on the cold-formed steel book review written by the Chair under the auspices of this committee for Journal of Structural
Engineering. Other opportunities of this nature should be taken advantage of, when possible.

c) Deflections Paper – STRUCTURE in April ‘03
Our committee work on deflections is scheduled for publication in the April 2003 issue. Since the committee is concerned with the quality and impact of STRUCTURE magazine, and further delays in publication will likely result in the committee pulling the article from STRUCTURE and seeking another location for publication.

6) Current/Ongoing Business
a) 2003 Structures Congress “Recent Advances in Design of CFS”
b) 2004 Structures Congress “Practical Advances in Low-rise Metal Buildings..”
Tom Sputo is leading the committee’s efforts on this session. It is not intended to be a cold-formed only session. Tom needs additional papers for the session if it is approved, Jim Fisher volunteered Tom Murray for this pending approval of the session.
c) Review of research needs list and prioritization

7) New Business
a) Publicizing research needs list?
Publicizing the research needs list the committee has developed and combining it with other research needs lists and priorities developed in the CFS world is imperative for improving the state of current research backing. The success of the ASCE report card idea, as well as other experiences by the committee indicate this is an important task. Our goal would be to foster a industry-wide research needs list/report card that could be used to justify research needs and improve the level of cold-formed steel engineering.

Ideas for spreading the word: The committee will develop a brief blurb based on the research prioritization conducted. This blurb will then be taken to
SEI committee notes/newsletter
SFA – Technology Team through Jay Larson
LGSEA – Research Arm through Dean Peyton
NAHB – Through Nader?
Handed out at 2003 Structures Congress
Army Corps? contact?
Placed on our committee web site.
It was also suggested that Structural Engineer magazine might be a suitable venue.

b) ASCE Proposal based on research needs list?
This topic was discussed in some detail. The topics in item 1 (primers, state-of-the art summaries were felt to be the most obvious place for the committee efforts.) Several of the identified research needs were associated with possible champions for these efforts.

Comments on the items from the research list follow.
1. Ideas for primers or state-of-the-art / state-of-current-practice summaries
(c) Primer on options, current practice, and state of the art for CFS shear walls (Tim R.)
Reynaud would be a good person to lead this effort in the future (interest?)
(d) Primer on use and limitations of CFS headers (Tim R., Rob M.)
Efforts in the AISI-COFS provide new information on headers that appears to not be broadly
disseminated at this time. Roger Laboube performed this work and would be an obvious champion.
(e) Summary of CFS applications and methodology in seismic design (Tom M.)
New efforts by Hank Martin and the new AISI-COS Sub 32 in Seismic design should be monitored
and assistance given as appropriate.

(h) Bracing of studs, girts, and purlins based on best current practice (George P., Tim R.)
Tom Sputo and Perry Green are actively performing research in this area. They may be a good
candidate for providing state of the art materials on bracing.

(g) State of the art summary of Direct Strength Design Method (Rich L.)
Excellent idea, but not quite ready – see agenda item 7d for more on Direct Strength. Also, in a couple
of years this may be the beginnings of a possible thesis topic for Joe Wellinghoff.
(b) Best current practices for stud walls with bar joist systems (Tim R.)
Current practice was discussed.

(f) State of the art of anti-terrorist design and CFS (Tom M.)
(a) Primer on web crippling behavior and design (George P.)

2. CFS and CFS Systems, Basic Behavior Questions
The list in section 2 is felt to be fundamentally important, but outside of the realistic research efforts of
the committee at this time.

   (b) Stud-to-track detail connection and system performance (Hani S.)
   (c) Lateral load transfer: Diaphragm loads? vertical elements, is it ok now? (Colin R.)
   (g) Boxed header design "composite"/"lack-of composite" action (Rob M.)
   (d) Multi-story lateral stiffness: Load transfer, wall!floor!wall, floor weak link? (Colin)
   (a) Bottom span bridging needs (distortional buckling?) for multi-span floor joists. (Joe W.)
   (e) Basic mechanics solution (comp. program) for anchorage forces of purlins (Jim F.)
   (i) Modeling & behavior of inelastic collapse response of steel studs in bending (Hani S.)
   (j) Panelization of stud framing (George P.)
   (h) Connection details needed for blast resistant steel stud walls (Hani S.)
   (f) Design and checking of cross-aisle stability of CFS racks (Tom S.)

3. Ideas on non-binding standards / standardization needs
Not discussed in significant detail, the Chair suggested staying away from item 1c for the immediate
future.

   (c) Standard connection details (Tim R., Matt M.)
   (b) Catalog of anticipated behavior for a given connection details (Rich L.)
   (a) QA/consistency and standards amongst steel gauges/thickness (Colin R.)
   (d) Application specific inspection criteria that engineers use to educate inspectors (Ed D.)

After brief discussion it was decided that the work on bracing, with Tom Sputo as the
champion of the work will be pursued for an ASCE special project. The work
identified with Roger Laboube and Reynaud Serrette as champions remain excellent
future candidates, but since they are not members of the committee it was not felt
appropriate to go forward with those proposals at this time. The Chair will work with
Tom Sputo to develop a proposal related to state-of-the-art on bracing of cold-formed
steel.

c) 2005 Structures Congress?
Discussion on this issue was tabled due to time.

d) Direct Strength Method – shepherding
Committee members agreed to check example problems related to the Direct Strength Method. These examples would be expected in the next 6 to 12 months.

8) Logistics/Organization Details
   a) Future meeting locations?
      The committee will meet in 6 months at the July AISI meeting. AISI has been incredibly gracious with allowing ASCE to piggyback on its meetings. AISI will be thanked for their friendliness in this regard and the Chair will ask if they are ok with continuing in this fashion.

      We may want to consider meeting at the AISI-COFS meeting.

   b) Member recruitment
      Roger Laboube and Reynaud Serrette will be asked by the chair to join. Jay Larson and Nabil Rahman have asked to join the committee. They will be added as friends of the committee for now and formally processed in the summer. Ed Kile has attended both of the meetings and will be asked to join the committee. Vince Sagan has mentioned that SGH may have some worth candidates for the committee.

   c) Roster updating
      Updates from Madsen and Sputo received.

   d) Control group members
      A new CG member to replace Tom Miller is needed. CG members can be reimbursed for one meeting per year. Interested members should contact the Chair.

9) Next Meeting
   July AISI

10) Review of action items resulting from this meeting.
    • Chair will write a blurb based on our research needs and contact several organizations to begin spreading the word.
    • Tom Sputo will develop a special project on bracing for ASCE’s consideration, an advisory group of committee members will be needed.
    • Session ideas for the 2005 Structures Congress ideas are needed
    • The committee will review Direct Strength Method example problems

11) Adjournment