

**CORRUGATED STEEL PIPE INSTITUTE  
TECHNICAL ADVISORY COMMITTEE  
Memorandum of Meeting**

10:00 AM, Tuesday April 8, 2014 – CSPI, Cambridge

Present:	Kevin Williams – Chair	Atlantic Industries Ltd
	Randy McDonald, Lyndsay Dokas	Armtec
	Bruce Matheson	Frontier Construction Products
	Kamran Derayeh	ArcelorMittal
	Mike Mounts	DOW
	Ian Berry	Warner Custom Coating
	Dave Penny	CSPI
	Ray Wilcock	CSPI
Absent:	Shane Setter	Ironside

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**1. Welcome and Opening Remarks**

Kevin Williams opened the meeting and had all attendees introduce themselves.

**2. Review Minutes from January 17<sup>th</sup>, 2014**

Minutes were reviewed and a motion for approval was made by Randy, second by Cameron.

**3. MTO Structures Task Force**

Kevin started the discussion and broke this item into three separate projects.

**1) Bolts & Bolted Seams**

Dave has discussed this topic with MTO (2 People) and MTQ (Donald Villeneuve) about the Leland proposal and other coated bolt options. MTQ has offered to do testing for salt spray. Samples would consist of plates bolted together using a variety of coated bolt options. Abrasion needs to be accounted for. A question was posed as to the status of the

MTO committee lead by Maria Bianchin. Dave & Ray will be visiting MTO within the next month to determine status of the committee.

**Action:** MTO Task Force. Anna West will not be leading this task force but will be participating as needed. Kevin has volunteered to lead the technical direction but is requesting assistance from someone on the committee to support through items such as coordinating meetings and taking minutes.

**Action:** Ray to send pictures of Kingston MTO structure to members, which shows the seepage of salt through the bolt holes. This structure and issue was described in Anna's paper for TRB. It is on the CSPI website.

## **2) Salt Laden Water Proofing Membranes**

Discussion involved the membranes that could be used over plate structures. Kevin asked about the spec in NFLD. Randy stated that the spec was very loose.

**Action:** Members to supply a list of materials and placement specifications to CSPI by mid May that can be presented to MTO.

## **3) Certification of Structural Steel Plate Plants**

Dave & Ray met with both BNQ (Quebec) and CWB (Ontario). Discussion involved the changes to CSA G401-14 pertaining to QA/QC CSP protocols, and the submission of proposals for Structural Steel Plate plant protocols. MTO requires certification for steel plate. Both BNQ and CWB will make proposals for plate protocols and certification of plants in Ayr (ON), Guelph (ON) and Dorchester (NB) by mid May.

\* It is expected that MTQ will require plant certification also. If this becomes a requirement, then BNQ will have to be used.

## **4. NFLD Update & Outcomes**

Kevin stated that under Technical Bulletin 13, the government has taken a more conservative approach and specified Polymer Coated Plate. Requirements call for service life design based on galvanized and then add polymer. Dave has proposed to NLDOT that steel thickness be set at a minimum of 4.7mm for durability considerations when water is in contact with steel. Additional thickness will then be based only upon structural requirements.

In Dave's meeting with the DOT, they revealed that the DOT was approached by Canada Culvert for structural plate, deep corrugated and polymer plate. The DOT's concern is what coating they are using or proposing and if products meet CSA G 401-14. Suspect that it may be Contech product which is not certified to CSA G 401-14.

**Action:** Dave to follow up with DOT for update. No announcement from DOT yet. Dave to summarize discussion.

## **5. Polymer Laminated & Repair Training**

Dave discussed the Alberta Transportation Trenchcoat site. This was supplied by Canada Culvert. The issue relates to delamination of the polymer at the seams. The seams were over stressed and the site was very salty. Alberta Trans. Would like Dave to complete this project, even though it would extend into his retirement. Dave mentioned examples of test repair methods to be discussed with the DOT and has asked members and NCSPA members for possible methods. Examples:

- Wash the seam, then apply tape (Denso Butyl 35 Tape)
- Paint using Ranbar (Dave mentioned that MTQ have abrasion results and concerns)
- Paint with dry galvanized paint
- Paint and tape

This project will be completed in late July / August and funding can come partially from AISI. The goal is to develop a repair method which offers equivalent EMSL to that of Trenchcoat.

Mike suggested 3 types of repair methods: POR-15 from POR-PATCH, TPC 515-7 from Elantas PDG (previously known as Ranbar) and Polyarmor G17 from Protech Powder Coatings.

**Action:** Mike to forward data sheets to Dave.

**Action:** Ian has some testing of those materials – will send to Dave.

Outstanding from last meeting:

A number of issues have been identified with respect to handling and repairing polymer laminated pipes. M. Mounts pointed out that an issue related to damage at the sharp bends on SRP is being addressed with the introduction of rounder profile. We need to develop a Training Guideline for Fabricators. **Shane** agreed to put a DRAFT together for TAC review in mid February. We also have an opportunity to work with Alberta Transportation to test various repair techniques on a problem site. **Bruce** agreed to prepare a DRAFT for TAC review.

## **6. Green Handbook Chapter 6**

Randy stated that Lyndsay has reviewed the tables in relation to the updates in CHBDC. She is about 50% complete. SPCSP corrugations are Type 1 and Type 2. Only Type 1 is complete.

**Action:** Kevin to review and determine if Type 2 SPCSP and Type 3DCSP is to be included and calculations required. Example 3 and 6 are to be reviewed by Kevin.

**Action:** Randy to take TLP off line to discuss involvement with MTQ requirement that new calculations and charts reflecting CHBDC vs. AASHTO be provided.

**Action:** Armtec & Atlantic to compare calculations & agree. Randy & Kevin to develop a plan to update height of cover tables (Pg 249). It was agreed that tables be based upon CHBDC with no corrosion loss.

## **7. Transportation Research Board**

Kevin explained that this is a US organization funded by State DOT's. Their annual meeting is held each year in January. Key current themes include:

- Durability
- Rehabilitation
- Low Rating

Joint Testing:        Structural Performance  
                             Joints (concrete issues)  
                             Design Criteria

Kevin asked if we should explore these studies to determine what impact it has on our initiatives. To be discussed at next meeting.

## **8. ASTM Update**

Mike stated that at NCSA, discussion around profile changes to ASTM spec. Radius would increase from  $\frac{1}{4}$  to  $\frac{1}{2}$ . New tooling may be required by US manufacturers.

Mike McGough plans to visit the ASTM meeting being held in Toronto in early May. The plan is to visit the Queen's University compression lab in Kingston where coupler tests are ongoing. (Dr. Ian Moore)

Kevin mentioned there is one ballot pertaining to 4 flange plate as per CSA G401-14. If there are any concerns, please advise Kevin.

## **9. Discussion / New Business**

1) Dave suggested we participate with NCSA TAC once per year. (Annual fall meeting)  
This was supported by the committee.

- 2) Kevin asked if there were any issues with regards to the Standing Structures Committee. It was agreed that Dave would talk about the Ontario Task Force. Also, announce to the committee that we have highlighted changes to CHBDC pertaining to CSP in “In the Trenches”, and changes to CSA G401.
- 3) Announce the CSA G401 changes on the website with the ITT stories.
- 4) Randy asked about free download off the CSPI website for CSA G401. Dave is talking to CSA (Ken Phu) about options and cost. Dave will update at the next meeting.
- 5) AREMA (American Railroad Engineers) – Recognize products with ASTM 796.

## **10. Adjournment & Next Meeting**

The meeting was adjourned at 11:55 AM. Next TAC meeting scheduled for Monday, June 2<sup>nd</sup> in Calgary (annual meeting).

Secretary  
Ray Wilcock