Overhead Contact Systems (OCS) Subcommittee
Rail Transportation Standards Committee
Vehicular Technology Society
Institute of Electrical and Electronic Engineers (IEEE)

http://grouper.ieee.org/groups/railtransit/ocs/index.htm

Minutes of Meeting 41
March 31 & April 1, 2016
The Yale Club of New York
50 Vanderbilt Avenue
New York, New York 10018 USA

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Meeting Minutes

Thursday, March 31, 2016:

8:30 AM: OCS sub-committee (hereafter committee) members met at The Yale Club of New York, 50 Vanderbilt Avenue, New York, New York, USA. OCS’s meeting followed Traction Power Substations (TPS) sub-committee meeting held at the same venue on Tuesday, March 29 and Wednesday, March 30.

Administrative Business:

Committee Chairman, Paul White, NTSB Corporation, hereafter “Chair”; opened the meeting with review of the schedule, safety briefing of the building, discussion of sponsored events – lunch, dinner and social events. An invitation to sponsor breaks, a meal or other social gathering was extended to the membership for those in a position to host the committee.

The Chair extended a special thank you to Metro-North Railroad for arranging the meeting venue, and for breakfast and lunch.

Attendees introduced themselves. Attendance numbers for the meeting:

Thursday, March 31, 2016 50 signed attendees
Friday, April 1, 2016 36 signed attendees

It should be noted Thursday’s attendance was the highest number of attendees on record, and was boosted considerably by eight representatives of Metro-North Railroad who attended both days, though two were different individuals.

A safety briefing was provided, room logistics and other general information about The Yale Club of New York.

Each attendee introduced themselves and their professional affiliation to the OCS industry.
Attendees were invited to attend a cocktail and hors d’oeuvres reception at the Archer Hotel rooftop Spyglass bar hosted by MAC Products. Dinner afterward is Dutch, with a group of Sub-Committee members dining at the Archer hotel restaurant, Fabrick.

Meeting minutes from Baltimore (22-23 October 2015) were then submitted to the Committee, which were accepted by acclimation.

The recording secretary presented a new attendance roster that is hoped will facilitate signing in and Committee member identification. Members are encouraged to send a digital image of themselves to the recording secretary at: jwilliams@reawire.com

The Chair reviewed travel reimbursement policy and procedure. IEEE policy allows for certain travel expense reimbursement to certain agency personnel who are members of IEEE and our Society, Vehicular Technology Society, including retired members with tenure. David Thurston was in attendance and available to assist with any questions regarding this or working group activities. Expense report forms and instructions are available on the OCS web site:

Expense Report File
Ref: http://grouper.ieee.org/groups/railtransit/ocs/OCSArchive2015/2015%20IEEE%20Expense%20Report-Charlotte%202015-.xlsx

Travel Expense Policy File
Ref: http://grouper.ieee.org/groups/railtransit/ocs/OCS%20Reference%20Documents/VTS%20Travel%20Expense%20Policy.pdf

The Chair reviewed IEEE policy regarding meetings and committee work, to refrain from competitive discussion and maintain a professional approach to all standards work.

American Public Transit Association (APTA) holds their annual Rail Conference in Phoenix, Arizona June 19 through 22. The Committee agreed to meet June 21-22 in conjunction with the conference. Hotel is Sheraton Grand Phoenix. Information is available at: http://www.apta.com/mc/rail/Pages/default.aspx

The Committee’s fall meeting will be in St. Louis, hosted by St. Louis Metro-Link and Normandy Machine Company – members Jerry Woodruff and Chris Tyrrell. An exact date during September – October time frame will be determined.

New Business and Presentations:

Welcome and Presentation by Host Agency Metro-North Railroad - Metro-North, our host agency, was extremely well represented with eight attendees both days. On Thursday we had Darin D’Ambrosio, Leonard Kendall, Lee Martin, Jim Pepitone, Dereck Singh, Steve Walsh, Martin Wong, Kanstausin Yanchanka; and on Friday Messieurs Martin and Yanchanka were represented by Paul Cooper and V. Rizvi. The Committee is grateful to Metro-North’s hospitality, enthusiasm for the Committee’s standards work, and participation in this New York meeting.

Jim Pepitone, Director of Power Systems for Metro-North opened their presentation with an overview of the system, brief history and several interesting facts. Harlem and Hudson River lines are 3rd rail powered; New Haven Line is overhead catenary. The “crown jewel” of the system is Grand Central Terminal, owned and operated by Metro-North.

James Pfeiffer, Assistant Director of Catenary Systems then went into greater detail on the system, specifically the 241 mile AC catenary system that powers the New Haven Line. His message to the Committee was “we need to stick to existing standards”.
Please see the link to the Metro-North PowerPoint Presentation:

And, a fascinating slide show of vintage photographs of Metro-North’s system and predecessor system:

Dave Thurston encouraged the Committee Members to become eligible to vote in the IEEE elections. Voter eligibility is established through membership in IEEE and our parent Society - Vehicular Technology Society (VTS). Our own Committee Member, Bih-Yuan Ku, Professor of Electrical Engineering from National Taipei University of Technology is on the ballot this year. Please review your eligibility and if not become eligible and cast your vote for Bih-Yuan Ku. Dave informed the membership votes are cumulative, so only vote for Bih-Yuan.

It was noted the password for accessing and editing standards should be on the attendance roster / sign-in sheet. This has been added to the upper right of each page.

The Chair raised the potential need for a working group to develop a standard covering the cleaning of 3rd Rail and Insulators, similar to the ANSI standard on cleaning insulators. Volunteers should contact the Chair.

Received a retirement notice from Jeff Stevenson of Parsons, The committee wishes Jeff well in his retirement.

Hatch, Mott & McDonald will split into two companies – Hatch (Canada) and Mott McDonald (US).

Dave Thurston invited Committee attendees of the upcoming Joint Rail Conference (IEEE, ASME, ASCE, and others) held the week of April 11 at the University of South Carolina in Columbia, SC. Link:  https://www.asme.org/events/joint-rail-conference

Presentations:

1) Carl Petersen, Director of Engineering for Nicopress Products, Cleveland, Ohio – www.nicopress.com presented a history of the company and reviewed their product offering.

2) Daniel Steiner of Kummler & Matter – www.kuma.ch presented a PowerPoint on their design and installation of the Gotthard Tunnel. From their web site:

   November 11, 2014

   This memorable moment was duly commemorated with a little celebration. Since the start of installation work back in April 2011, a total of 114 km of overhead lines with 2860 support pillars will have been installed in this tunnel. To accomplish this, 100,000 hours of labor have been clocked up. This celebration was intended to express our gratitude to our installation staff.

   Final completion work is scheduled to last until the end of March 2015 to finalize the supply of electrical power to the catenary wires in the tunnel. By the end of September 2015, the traction current systems should be completed on the open routes leading up to the North and South portals, with total completion of all work scheduled to take place by 1 October 2015.

Other notes: 35 mile tunnel – December 2016 commissioning / opening. Presentation on Swiss Public Rail Transport; schedule, stations, designed around travel time of 50 minutes, one hour and 50 minutes, two hours and 50 minutes, etc. - allows departure on the hour. Dealing with the Alps; nice scenery, but tunnel was necessary to meet 50 minute divisible timetable. Challenge is aerodynamics; closer to “voodoo” than mathematics; volume of tunnel is solution, but costly. Chose CuAg for electrical properties for this tunnel; corrosion is big problem; aluminum free design.

Link to Kummler & Matter PowerPoint: 3) David Zuecher, Sales Engineer for MAC Products – www.macproducts.net gave a presentation on spring constant tension device. Tensorex – spiral spring design. Replace balance weight system. For street cars / light rail. Technology also used on higher speed, some members mentioned.
Joris Briand, Sales Manager for ROV Railway Industry – www.rovrailwayindustry.com gave a presentation on OCS inspection tools and equipment. Visiocat camera system is used with laser technology for precise measurement of wear and deflection of contact wire.

Graham Scaife of Stonybrook Manufacturing – www.stonybrookmfg.com discussed work they do on customer pole, truss and steel design work. Example – doing the bollards at WTC; designed to withstand 80,000# tractor trailer at 100 MPH.

Lunch was provided by the host agency – Metro-North.

Jim Pepitone, Director Power Systems, Metro-North Railroad reviewed tour scheduled for next day, logistics, etc.

Chair reviewed Guidelines for IEEE Working Group Meetings, read the IEEE slides on the same.

Paul White, Chair then provided a presentation on HNTB’s work on Boston’s Orient Heights Station. The conditions and job requirements were very challenging for this station.

Suresh Shrimavle, WG Chair of IEEE Draft Standard, for Application of Surge Arrestors for Direct Current Transit Systems shared information on the status of his working group, inviting any of the sub-committee participate in the working group.

And then, the Committee broke into Working Groups for the balance of the day and the next day.

Draft Standard P-1626 – DC Overhead Contact System Insulation Requirements – draft standard has been withdrawn due to similarities with existing EU standards.

Draft Standard P-1627 – Lightning Arrestors – Suresh Shrimavle, Chair; Dev Paul and Zoltan Horvath, Vice-Chairs. Other WG members are: Belete Bekele, Craig Norman and Eric Parsons.

Suresh Shrimavle provided this update for the Working Group after the New York meeting:

PAR expired in 2015, new PAR submitted on 3/31/2016 per the instructions from Michael Kipness for NesCom Committee approval. Per information from Michael this approval will happen in June. Working Group regrouping and additional participants have shown interest in joining.
The Draft D1.6 is being revised with accurate information contained in the body for technical details, references, application, testing and maintenance and copy right protection from manufacturer/s etc. The revised draft will be sent to active participants for review and comments within WG. The Final draft then will be submitted to OCS committee for review and comments. The goal is to submit the FINAL draft to open for ballot by June 2016.

Standard P-1628 – Recommended Practice for Maintenance of Overhead Contact Systems for Transit Systems – this is an approved IEEE Standard; it is approaching the review period and any upgrades required will be incorporated. Please provide any input to the Chair.

Standard P-1629 – Performance of Overhead Current Collectors for Transit Vehicles – Jeffery Sisson is chairing this working group to review and renew this standard dealing with Pantographs. An update from Jeffery will be obtained as soon as possible.

Standard P-1630 – Supporting Structures for Overhead Contact Systems for Transit Applications – Steve Adkins and Steve Gross, Co-Chairs; other members are Mike Rassias, Mario Marozzi, and Graham Scaife.

Steve Adkins this update for the Working Group after the New York meeting:

The OCS Supporting Structures working group progressed the maintenance update of the P-1630 standard, “Supporting Structures for Overhead Contact Systems for Transit Systems,” which was published in 2012.

Previously it was reported the working group would include standards for torqueing anchor bolts, and the use of lock nuts in the revisions under consideration.

Standard P-1791 - OCS Terminology – Committee Chair is Chris Pagni and Vice-Chair is Steve Norton.

Steve Norton provided this update for the Working Group after the New York meeting:

P1791 D10; Draft Rec. Prac. for Terminology used for Direct Current Electric Transit Overhead Contact Systems and addressed the comments that were submitted by the previous balloting members. On April 4th, 2016 we forwarded all of that material to Michael Kipness, (Program Manager, IEEE Standards Activities) for the PAR to be resubmitted for balloting.

Standard P-1833 – Design Criteria – WG Co-Chair Moises Ramos, NHTB Corporation will be ready this coming fall, according to the Chair for ballot submittal. It was noted in Baltimore that Suresh Shrimavle will assist with this or perhaps lead it with Moises focused on the Draft Guide for Testing and Commissioning of OCS.

Standard P-1896 – Standard for Contact Wire Identification – OCS Subcommittee Chair reported the ballot passed with the minimum 75% affirmation. The Standard has been sent to IEEE RevCom.

Standard P-2406 – Draft Standard for Disconnect Switch – Jerry Woodruff and Chris Tyrrell, NMC Powersmith Inc., are Co-Chairs of this WG.

Chris Tyrrell provided this update for the Working Group after the New York meeting:

P2406 Standard for DC Disconnect switches went to ballot. It had 11 voters, which was not enough participation to be passed. Out of the 11, 5 were to approve, 5 were disapprove, 1 abstain. The group is now working to resolve the disapproving baloter’s comments. The general consensus is all the information is good, but there needs to be more differentiation between recommendations (informational annex added for this) and requirements typically associated with a Standard.

Discussed Potential Standards / Guides:
Potential Standard – Live Line Maintenance – Committee Chair Paul White has indicated this potential standard may be taken over by Gary Clarner, AFL Global, Vice-Chair Norton, and Zolton Horvath, will co-Chair this working group. Next Step: draft formulation, Project Authorization Request (PAR) application and draft standard status.

Testing & Commissioning Guide: Moises Ramos, HNTB Corporation renewed his interest in the Committee assigning a WG to develop a Guide for testing and commissioning a newly installed overhead contact system (OCS) installation or expansion. There was general consensus and no objection. Those interested should contact Moises at moramos@hntb.com.

Pantograph Security: Mike Rassias, HNTB to chair this new working group for the development of a Guide for consistently and effectively addressing pantograph security. [see note from the following day that created this group].

Meeting adjourned 4:00PM.

Friday, April 1, 2016

8:30 AM: On day two the meeting reconvened at The Yale Club of New York, 50 Vanderbilt Avenue, New York, New York, USA. The host agency Metro-North Railroad once again arranged the venue and provided Continental Breakfast for the members and guests.

OCS Sub-Committee meeting was called to order by the Chair at 8:30. A review of the day’s schedule was provided, to include discussion topics among attendees, working group discussion, a special impromptu presentation by Jim Pepitone of the host agency, Metro-North Railroad on their program to replace and upgrade 3rd rail conductor, lunch schedule and afternoon tour of the lower levels of Grand Central Terminal.

Discussion Topics:

Tom Langer of LA Metro brought up the fact Denver is reportedly using drones for general inspections of their OCS and that this may be of interest for further discussion or as a presentation topic by Denver.

Mike Rassias of HNTB raised the subject of pantograph security, specifically the need for a guide covering how best to address. Comments were added by several members, including Moises Ramos, Jim Pepitone, Jeffrey Sisson, et al. Consensus is to form a working group for the purpose of drafting a guide. Mike will Chair this working group. Volunteers wanting to participate, please contact Mike Rassias.

Mike also suggested the Sub-Committee produce a list of standards with all appropriate attributes, including review / renewal dates. The Chair agreed and assigned this task to John Schlick, Sub-Committee Secretary.

Working groups met for an hour after these specific topics were discussed.

10:00 AM: Jim Pepitone and his team from Metro-North came up with, on very short notice, and presented their program to replace / upgrade the 3rd rail on over 251 miles of track for their Hudson River and Harlem Lines. Metro-North has spent over ten years working to evaluate, test, design and develop, along with a
number of suppliers and engineering staff, an improved replacement to conventional cast iron 3rd rail and relative support brackets. The approved replacement has many advantages, including lighter weight for ease of installation and repair, conductivity for lower operating cost, improved dielectric design to help prevent fires. Wear life was one stated negative compared to the conventional design, though life is still quite long. $20 million has been budgeted for the current program. It is expected today replacement will take at least 20 years and many millions of dollars.

Link to Metro-North PowerPoint:

11:00 AM: The membership returned to their working groups for another hour of work prior to lunch.

There was discussion concerning standards organization and their inclination to produce unique standards, which is natural for independent organizations. Mike Raisses asked about a list of standards with formal view of renewal. The Chair assigned John Schlick, Secretary the task of producing such a list.

iMeet Central was mentioned as a possible tool for Working Group Chairs and Members to use in their work. Hesham Elvarawy of Washington Metro provided a presentation to the Traction Power Sub-Committee on this tool and below is a quote from Hesham’s email to Gary Touryan below:

Gary,

I plan to attend, also I don’t think I would need more than half an hour to present iMeet central, if you want to allow more time for others.

A piece of good news: the IEEE-SA gave us the iMeet central workspaces for the subcommittee’s workgroups, this link https://ieee-sa.imeetcentral.com/tpssc/ will take you to the “Public Space” where anyone can see the general information about the TPS subcommittee, however if you click on the committee workspaces tab you will see a drop down menu for the working groups “Private Spaces”, the private space is by invitation only and requires login to access the documents/ make comments etc. I prefer to start inviting members after presenting iMeet central next meeting, so no one gets confused when receiving the automated emails. Also I need to do some coordination with each WG chair before I start to adding members in his/her WG.

Per Steve Bezner recommendation, I am working on a power point presentation that I will share with you and the subcommittee officials copied here in this email before the meeting.

The public space is not developed yet, I am currently working on it, will try to finish as much as I can before the meeting. Please send me the latest or the most updated WG/TF status report once you get it back from the chairs and vice-chairs.

Please feel free to contact me if you have any questions.

Thanks

-Hesham

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Committee broke for lunch at 11:45 AM. Those attending a tour of the DC Power Room of Grand Central Terminal were to meet at 1:00 PM by the clock in the main terminal.

The meeting was adjourned after lunch and to continue for those attending the tour.

Next Meeting:
The next meeting will be concurrent with the 2016 Rail Conference of APTA, www.apta.com/mc/rail/pages/default.aspx June 21-22 in Phoenix. Hotel accommodations are provided on the web site. Hope to see you in Phoenix.

Joe Williams, Recording Secretary