

Preliminary Agenda 19 August 2009

PRELIMINARY MEETING AGENDA – CE-2.1 SUBCOMMITTEE ON TEST PROCEDURES 13 – 14 October 2009 in Savannah, GA

1. Approval of the 28 – 29 April 2009 Minutes

2. TEST PROCEDURE PROJECTS (BY PROJECT NUMBER)

"If any SP listed below receives insufficient votes for approval, the committee may approve the document for EDEC ballot at this meeting. It is the responsibility of the member to submit comments in writing prior to the meeting".

A. SP-5194 (was PN-4943), TP-65B, MFG (Max Peel)

Carl Fritz reported, for the record, that a Letter ballot was issued 10 July 2003. Confirmation with ECA indicated the project number is still good and can be used for the SP ballot. Carl Fritz presented a revised draft of the subject standard to the committee.

The committee reviewed the revised draft prepared by Max Peel. Frank Ruffino indicated that he had several other comments to be considered for clarification. He will provide those comment to Max Peel. It was also discussed to consider replacing the existing cleaning process with a specific ASTM procedure. The project leader will consider incorporating comments provided by Frank Ruffino as well as considering the ASTM cleaning process.

It was moved by John Healey and seconded by Don Chambers to send the standard to EIA for a SP ballot. The motion was unanimously approved. It was also unanimously moved and approved that if there are sufficient ballots and no rejections received that the standard be sent to EIA for EDEC ballot and publication as an EIA Standard. In addition the standard should also be submitted to ANSI for publication as an American National Standard.

Frank to provide Max with his comments on the most recent copy. Carl provided Frank with the latest marked copy of the file dated 6oct08.

Sent Max an e-mail on 1 June 2009 recommending that we go with what is in the document dated 6oct08 after reviewing the suggesting to us the ASTM cleaning procedure.

See EIA-364-65 Cleaning Procedure Comparison dated 5 June 2009.

Sent the standard, cover memo (mccwil383) and Background Data Sheet to EIA for SP ballot on 16 July 2009.

Project number changed from PN-4943 to SP-5194 at the request of EIA.

SP Ballot issued 21 July 2009 with a ballot expiration date of 21 September 2009.

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B. SP-5083, TP- 5, 7, 8, 24, 25, 27, 37, 40, 44, 79, 85, 87, 88, 93, 94, 97, 98 (J. Toran)**

Carl notified EIA that TP-25 should be reaffirmed as well. At the time the letter was sent to reaffirm the standards TP-25 was under review for revision. Since then the project leader has officially withdrawn any recommended changes and the project is cancelled at the April 2007 meeting.

Notified EIA on 9 November 2008 that there was no need to reaffirm TP-87 since it is being revised under SP-5181.

Notified EIA on 12 March 2009 that there was no need to reaffirm TP-37B since it is being revised under SP-5184.

Standards TP-05B, 08B, 24B, 25C, 27B and 40B were published on 3 March 2009 and received by US Mail on 27 March 2009.

Standards TP-79, 85 and 93 were published on 10 March 2009 and received by US Mail on 27 March 2009.

Standard TP-88 was published on March 11, 2009, TP-94 and 98 were published on 25 March 2009, and TP-98 was published on 23 March 2009 and all were received by US Mail on 11 April 2009.

TP-44 needs to be reaffirmed. Tickled Cecelia on 29 May 2009.

TP-44 published on 20 May 2009 and received by US mail on 17 June 2009.

Project complete.

C. SP-5174-1 (previous designation PN-3787), EIA-364-1004, Environmental Test Methodology for Verifying the Current Rating of Free-Standing Power Contacts or Electrical Connectors and Sockets (Max Peel)

Confirmation with EIA following the meeting confirmed that there were 6 approved ballots and 3 rejections received by the ballot expiration date. The rejections were received from John Healey, Frank Ruffino and Vince Pascucci.

- The following e-mail was received from John Healey on 6 October 2008.

In a message dated 10/6/2008 6:02:31 P.M. Eastern Daylight Time, hjhealey@us.ibm.com writes:

Cecelia, Here's my negative ballot. The major reasons for my disapproval are 1) I still do not agree with the sample sizes selected; 2) para. 3.1.7 and Table 1 cause confusion over which test sequences are appropriate; and 3) there is no means for determining the test parameters that should be used for a particular application.

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- The following e-mail reply was sent by Max Peel to John Healey on 15 October 2008 on his negative ballot.

John,

This is to acknowledge receipt of your negative ballot. I have reviewed your comments and the following is the disposition of same.

1) Sample size: Not accepted. No alternative was indicated. The document allows the sample size to be whatever the user agency desires. All they have to do is to specify what they want. The numbers in the document are simply default levels

2) I will clarify the statements in 3.1.7 and Table 1. If changes are required they will be classified as clarification.

3) Test Parameters: Not accepted. The intent of this document is not to set test parameters or create a performance document. . It was initiated to establish a test sequence that would be common. The test parameters has to come from the user agencies. The reason for this is that there are no dominate set of parameters or requirement that is in use. It appears that the severity levels , durations and requirements are based on the desires of each individual company and their own preferences based on specific applications. In other words, they are all different.

Regards,

Carl reported that after Max Peel reviews and replies to all negative ballots and revise the standard to resolve the issues. It was moved by Frank Ruffino and seconded by Dave Bouzek to sent out the revised standard on a short 30-day SP ballot. The motion was unanimously approved.

D. SP- 5179, TP-112, Effective Resistance of Parallel Circuits Test Procedure for Electrical Connectors and Sockets (Frank Ruffino)

Carl reported that he sent standard, cover memo (mccwil369), and Background Data Sheet to EIA for a SP ballot on 5 March 2009 on behalf of Frank Ruffino.

SP Ballot issued 10 March 2009 with a ballot expiration date of 11 May 2009.

During the meeting paragraph 1.3 and 3.2 were revised for clarification. See revised standard dated 28apr09.

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- The following rejected ballot was received from Max Peel on 7 May 2009:

Ms. Cecelia Yates
ECA Engineering

RE: SP5179, Proposed TP 112

Cecelia,

Please find attached my disapproval of referenced document.
The reasons for the disapproval are as follows:

1. I do not object to the basic scope of the document. However, in reviewing said document it does not appear to be formatted to satisfy the intent of a test procedure by definition. A test procedure is a "how to do" type document which describes the steps required, equipment to be used, special sample preparation required, etc.
2. A procedure is a document that a technician can use to generate data to satisfy performance requirements of a given connector. The document as written does not satisfy the intent. It describes and concentrates on using and performing a series of calculations to establish a requirement.
3. Hence, the document is more of normative information, which should be an annex or addendum to a procedure. This would then have to have a series of statement requiring how to perform tests as required to be performed by a technician.
4. Within the body of the technical dissertation, there is a table showing a test sequence but no consideration on what or how it is to be performed. This falls more in line with the 'TS' series of documents rather than a TP. And I would have no objection in pursuing that approach although I also have several questions relating to the content of several areas involved.
5. In essence, my basic objection is "where is the procedure?" It doesn't exist except by calculation (which is not a TP).

Regards,



- The following rejected ballot was received from Bob Druckenmiller on 23 April 2009:

Comments:

My main reason for rejecting this document as issued is that this document is not a "test procedure" and should not be published as a TP. This document is a statistical data treatment procedure. My suggestions would be to add it to the base 364 document or to add it as an appendix to both of the contact resistance measurement TP's 06 and 23.

I also do not believe we should have the current rating listed in the title with nothing in the document. I believe the current rating portion should be it's own procedure and then can put as an appendix to TP70. It may awhile before this portion is developed.

Regards
Bob Druckenmiller

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E. SP-5180, TP-41E, Cable Flexing (Max Peel)

Sent Max marked copy of draft form Don Chambers to review on 22 February 2009.

- The following is my reply to Max's e-mail of 24 February 2009:

Max, I will not do anything until I hear from you. I have looked over the standard and offer the following from my recollection of discussions at the meeting.

Regarding the 360 degrees. Paragraph 2.1.1.1 is addressing 2 issues. The first issue is indication that the cyclic rate is 12 - 14 cycles per minutes. The second issue dealing with the 360 degrees is defining what 1 cycle constitutes. It constitutes going for example from left horizontal to vertical 90 degrees then to right horizontal, and finally returning through the vertical to left horizontal. The total excursion is 4 time 90 degrees or 360 degrees.

Regarding the weight. Paragraph 3.2.1.3. This paragraph is attempting to address very large cables having multiple conductors. These assemblies normally contain very large metal shell connectors. The intent here was to establish a weight as a function of a given length of length. Hanging a weight of 1 pound on this would have no effect.

Both issues may require some wordsmithing. I hope this is of some help.

Regards, Carl

- The following is Max's reply to my e-mail of 24 February 2009:

In a message dated 2/23/2009 4:32:32 PM Eastern Standard Time, MaxConRes writes:

Carl,

I have reviewed the revision and cannot agree at this time to submit it for a vote. Looks like some changes have been made which changes the objective of the document beyond my intention, For example, the total angle of bend should be 180 not 360 degrees The second one deals with the weight determination which I have no idea where that comes from. The intent of the 1 pound weight is simply is to take the slack out of the cable not to put stress on the cable. So I will have to review the proposal and straighten it out. Please do not submit this document for a vote until I accomplish this. Should be able to do this within a week.

Regards,

Carl notified the committee that he will submit revised draft as is for SP ballot. Don Chambers agreed to comment on SP ballot .

Sent the standard, cover memo (mccwil373) and Background Data Sheet to EIA for SP ballot on 29 May 2009.

SP Ballot issued 3 June 2009 with a ballot expiration date of 11 August 2009.

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- Dave Bouzek forwarded the following e-mail and marked copy on behalf of Richard Misiaszek at Raytheon Co. on 5 June 2009. These comments do not represent an official EIA ballot:

From: Richard R Misiaszek [mailto:Richard_R_Misiaszek@raytheon.com]

Sent: Friday, June 05, 2009 7:54 AM

To: David Bouzek

Subject: comments on SP-5180.

Hi David.

My suggested comments are in blue. The test seemed to imply that only plug connectors use molded boots or strain reliefs. Users may have cables with receptacles also.

Regards,

Rich

Rich Misiaszek
Advanced Interconnection Technology
Mechanical Engineering Directorate
Integrated Defense Systems

978.440.4213 office
978.440.2763 fax
misiaszek@raytheon.com

Raytheon Company
528 Boston Post Road
Mailbox 4-2-640
Sudbury, MA
01776

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F. SP-5181, TP-87A, Nanosecond Event Detection (Max Peel)

Carl Fritz reported that he sent standard, cover memo (mccwil360), and Background Data Sheet to EIA for a SP ballot on 9 November 2008 on behalf of Max Peel.

Ballot issued 14 November 2008 with a ballot expiration date of 15 January 2009.

- Received the following approved ballot with editorial comments from Don Chambers by e-mail on 9 February 2009:

1. I suggest revising para 1.2.3 as follows: mechanisms **then those** used for **the** 1.0 microsecond

Reason: Readability

2. Revise para 3.1.1.1.1: Add space after 2 IEC 801-2, ed 2:91).

Reason: Readability

3. Revise para 3.1.3.1.3: determined on the **calibration** plot.

Reason: Not everyone reading this document will be familiar with US shorthand. Readability.

4. Revise para 3.1.4.4: 100 milliamperes **±** 20 milliamperes

Reason: Omission of ± symbol from tolerance.

Confirmation with EIA following the meeting confirmed that there were 5 approved ballots, 1 abstains and 1 approved ballot with comments from Don Chambers received by the ballot expiration date.

Sent the standard and cover memo (mccwil371) to EIA for EDEC ballot on 20 February 2009. Sent letter accepting the favorable ballot with editorial comments from Don Chambers (mchambers) on behalf of Max Peel.

Sent Cecelia tickler on 1 June 2009.

Standard was published on 20 May 2009 and received by US Mail on 17 June 2009.

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G. SP-5184, TP-37C, Contact Engaging and Separating Force (Carl Fritz)

Carl reported that he sent cover memo (mccwil363) and PINS form to EIA requesting a project number on 13 November 2008.

Received project number PN-5184 on 20 November 2008.

Sent the standard, cover memo (mccwil364), Background Data Sheet, and draft ballot to EIA for SP ballot on 25 November 2008.

Ballot issued 9 December 2008 with a ballot expiration date of 9 February 2009.

- Received the following e-mail from Dave Bouzek on 15 December 2008:

Karl,

Here is a comment from SAE, Glenair, regarding EIA-364-37. We can discuss at our next meeting and I'll send any more should they come in.

Dave

The following is the contents of the attached letter:

Date: 15-Dec-08

To: EIA Committee

From: Alan Miklos / Pat Oakes - Glenair, Inc.

Subject: Review of EIA-364-37 Rev B, Contact engagement and separation force

Reference: Comments / Change Recommendations

The following changes and supporting rationale statements are intended to communicate recommendations for consideration and incorporation into the subject specification to help minimize any potential industry issues with respect to the requirements stated within the body of this document. The specific recommended wording or technical changes to be addressed are shown in blue font for ease of identification.

EIA test methods A, B, and C:

1). Technical: The different test methods in this procedure, paragraph 4.1, Method A, paragraph 4.2, Method B, and paragraph 4.3, Method C, do not align with the procedures in MIL-STD-1344, test method 2014. 2014 identifies the different methods as procedure I and procedure II. Many tier component specifications including AS39029 either call out the basic 2014 method or procedure I or procedure II, which leaves no traceable path between the EIA methods and the 1344 procedures.

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Current Wording: Paragraph 4.1, Method A, gauges-Paragraph 4.1, Method B, approved mating component-Paragraph 4.3, Method C, gauge force.

Recommended Wording: The following cross reference table should be added to the document.

| MIL-STD-1344 2014 Test method | EIA 364-37 Test method |
|-------------------------------|------------------------|
| Procedure I | Method A |
| Procedure II | Method B |
| | Method C |

Rationale: The additional cross reference table will link the previous 1344 procedures to the appropriate EIA methods.

- My reply to Dave Bouzek on 16 December 2008:

Dave, I just checked and the comment submitted by Alan Miklos is correct. I did not notice a mismatch in procedure/method designations in this standard. We should be able to add the table as an annex in the standard like we have done in others at the next meeting. The addition of the annex is non-technical and would be added for clarification and not require a new ballot. Regards and happy holidays, Carl

Confirmation with EIA following the meeting confirmed that there were 8 approved ballots received by the ballot expiration date. In addition there was 1 unofficial comment received from Dave Bouzek on behalf of SAE. To be discussed at the April 2009 meeting.

It was moved by Don Chambers and seconded by Kevin Rickard to add the cross reference to the standard as an informative annex for clarification. The motion was unanimously approved.

See revised standard dated 28 APR 09

Sent the standard and cover memo (mccwil374) to EIA for EDEC ballot on 1 June 2009. Sent letter of acknowledgement to David Bouzek (mbouzek6) on the unofficial comments he submitted on behalf of Alan Miklos / Pat Oakes of Glenair.

Standard was published on 11 June 2009 and received by US Mail on 27 June 2009.

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H. SP-5186, Standards Due for 5-Year Review, EIA-364, TP-51, 58, 96 and 109 (Carl Fritz)

5 Standards Due for 5 Year review

| Test | EIA-364 TP | Rev | Date of last issue | 5 Year due date | Years past due | Comments |
|---|------------|-----|--------------------|-----------------|----------------|------------------|
| Ice resistance of mated connectors | 51 | A | November-02 | October-07 | 1 | Published Nov 02 |
| Temperature life (with mechanical loading for connectors with removable contacts) | 58 | A | July-03 | June-08 | 1 | Published Jul 03 |
| Plating through hole integrity | 96 | | October-02 | October-07 | 1 | Published Nov 02 |
| Loop Inductance (1 nH - 10 nH) | 109 | | May-03 | April-08 | 1 | Published May 03 |

NOTE: Document format up to date on all of the above listed standards for 5-year review.

It was moved by Don Chambers and seconded by Ralph Antonelli to obtain a project number to reaffirm the listed standards, and send to EIA for a SP ballot. The motion was unanimously approved. It was also unanimously moved and approved that if there are sufficient ballots and no rejections received that the standard be sent to EIA for EDEC ballot and publication as an EIA Standard. In addition the standard should also be submitted to ANSI for publication as an American National Standard. TP-80 will be revised as a separate project.

Sent cover memo (mccwil375 and PINS form to EIA requesting a project number on 2 June 2009.

Received project number 2 June 2009.

Sent letter (mccwil378) and prepared ballot to EIA for SP ballot to reaffirm on 3 June 2009.

Ballot issued 3 June 2009 with a ballot expiration date of 3 August 2009.

Confirmation with EIA on 13 August 2009 verified that there were 8 approved ballots received and one abstention by the 3 August 2009 ballot expiration date.

Sent letter (mccwil387) to EIA for EDEC ballot to reaffirm all listed standards on 18 August 2009.

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I. SP-5187, EIA-364-88, Residual Magnetism Test Procedure for Electrical Connectors (Carl Fritz)

Carl Fritz indicated that this standard in its present form belongs in a museum. The standard is so old that it is unavailable in electronic form. Need to revise format and create an electronic version. Request permission to obtain a project number to revise and send out on SP ballot. Also request permission that if there are sufficient ballots and no rejections received that the standard be sent to EIA for EDEC ballot and publication as an EIA Standard. In addition the standard should also be submitted to ANSI for publication as an American National Standard. (See draft revision dated 15 April 2009.)

It was unanimously agreed to take this on as a new project to revise the standard. Carl Fritz has agreed to be project leader. It was moved by Don Chambers and seconded by Kevin Rickard to obtain a project number, and send the standard to EIA for a SP ballot. The motion was unanimously approved. It was also unanimously moved and approved that if there are sufficient ballots and no rejections received that the standard be sent to EIA for EDEC ballot and publication as an EIA Standard. In addition the standard should also be submitted to ANSI for publication as an American National Standard.

Sent cover memo (mccwil376 and PINS form to EIA requesting a project number on 2 June 2009.

Received project number 2 June 2009.

Sent the standard, cover memo (mccwil379) and Background Data Sheet to EIA for SP ballot on 3 June 2009.

Ballot issued 24 June 2009 with a ballot expiration date of 24 August 2009.

J. SP-5188, EIA-364-80, Low Frequency Shielding Effectiveness Test Procedure for Electrical Connectors and Sockets (Kevin Rickard)

Kevin Rickard has requested to revise the subject standard to address the 1 ohm resistance as part of the reference measurement. It was moved by Kevin Rickard and seconded by Don Chambers to obtain a project number, and send the standard to EIA for a SP ballot. The motion was unanimously approved. It was also unanimously moved and approved that if there are sufficient ballots and no rejections received that the standard be sent to EIA for EDEC ballot and publication as an EIA Standard. In addition the standard should also be submitted to ANSI for publication as an American National Standard.

Sent cover memo (mccwil377 and PINS form to EIA requesting a project number on 3 June 2009.

Received project number 3 June 2009 and notified Kevin Rickard.

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K. SP-5189, EIA-364-45A Firewall Flame Test Procedures for Electrical Connectors

- Carl Fritz reported that he received the following inquiry from Bob Willis on 13 January 2009 from:

Chris Kieser Special Projects Engineer

Environ Laboratories LLC
9725 Girard Avenue South
Bloomington, MN 55431-2621
www.environlab.com
Direct Line: 952-567-2308
Phone: 952-888-7795
Toll Free: 1-800-826-3710
Fax: 952-888-6345

The inquiry was as follows:

I would like to speak with someone on this stands committee (CE -2.0 National Connector Standards Committee) to get clarification of some test equipment required (specifically the burner required and where they may be acquired).

- Carl Fritz reported that he provided the following reply to Chris Kieser that he received from Kevin Rickard on 26 January 2009:

We use a Maxon Premix (Muncie, Indiana) Turistick TITE #928 with a Matheson Regulator model 8L350. I believe both companies are still in business but the model numbers are old and may require contact with the appropriate companies for their replacement model numbers. We use a large cylinder of Methane for the fuel. I hope this helps. The real trick of this test is getting just the right placement of the thermal couple. Also do not expect a steady state flame temperature. Shoot for the average.

Carl Fritz proposed that the committee may wish to consider adding this information to the test standard for clarification.

The unanimously agreed to take this on as a new project. Don Chambers has agreed to accept the review as project leader. It was moved by Don Chambers and seconded by Frank Ruffino to obtain a project number, and send the standard to EIA for a SP ballot. The motion was unanimously approved. It was also unanimously moved and approved that if there are sufficient ballots and no rejections received that the standard be sent to EIA for EDEC ballot and publication as an EIA Standard. In addition the standard should also be submitted to ANSI for publication as an American National Standard.

Sent cover memo (mccwil380 and PINS form to EIA requesting a project number on 4 June 2009 on behalf of Don Chambers.

Received project number 4 June 2009 and notified Don Chambers.

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L. SP-5195, TP-82B, Corrosivity of Plastic Test Procedure for Electrical Connectors and Sockets Housings (Max Peel)

- Received the following e-mail from Max Peel relative to his reply to Steve Radabaugh on 11 June 2009:

I'm in the process of writing it up to include it in EIA TP 82 as Method 2. This is a TP which defines a test to determine the corrosivity of plastics but can be used for your purposes as well with the methodology you have developed. I feel this will be the easiest route to follow. By copy of this e-mail, I'm requesting the secretary of the EIA group send out a mail ballot to authorize this action item. Hopefully this will allow a draft to be created and distributed before the next meeting.

Regards,

In a message dated 6/8/2009 6:20:51 P.M. Eastern Daylight Time, Steve.Radabaugh@hp.com writes:

Max,

Has the EIA committee voted on the proposal for adopting this test as a new industry standard, or are there any updates on this endeavor you can share?

Thanks,

Steve

From: Nikzad, Hamid
Sent: Tuesday, December 09, 2008 1:22 PM
To: Radabaugh, Steve; 'MaxConRes@aol.com'
Cc: Nikzad, Hamid
Subject: RE: EIA standard

Hi Max,

I hope that all is well with you and your family.

We want to get some update regarding this temperature/humidity spec that you were trying to get approval from EIA spec. It has been awhile that we worked on this specification and we are eager to make this spec as an industry standard document. Thanks for all your help.

Have a Wonderful Day,

Hamid

From: Radabaugh, Steve
Sent: Thursday, November 01, 2007 2:01 PM
To: Nikzad, Hamid; 'MaxConRes@aol.com'
Subject: RE: EIA standard

Max,

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Thanks for working on this. The main problem we are facing is from trapped plating salts during the gold plating operation (from an inadequate final rinse); however, we also occasionally find outgassing of bromine during insert molding of contacts causes corrosion; so this could also fit in the plastic corrosion section (and there are a few other corrosion issues we use this test for). But our primary focus is on the typical plating. One item I like about our procedure is we run it for two weeks at humidity, which makes the corrosion easier to see (I can see it much sooner, but after two weeks the corrosion sites get larger, and often gets the green center from the copper base metal; we find that often suppliers think the small white spots are just debris on the contacts and not corrosion). I need to verify if you can add the HP name to it; I would think that is OK, but I probably need to check since corrosion can be a sensitive issue.

I am re-attaching our procedure here. Let me know if having a paper describing the issue would be helpful; I do have one showing the differences between the same samples as received and properly cleaned as well as other info (and I probably need to check internally before I release that also; I have not published that outside of HP yet, but I was hoping to sometime soon).

Thanks again,

Steve

From: Nikzad, Hamid
Sent: Monday, October 29, 2007 1:54 PM
To: Radabaugh, Steve
Subject: FW: EIA standard

Hi Steve,

It seems that Max Peel has some difficulties to get this document approved by EIA group. We need to get back to him with information that he is requesting.

Have A Wonderful Day,

Hamid

From: MaxConRes@aol.com [mailto:MaxConRes@aol.com]
Sent: Monday, October 29, 2007 11:44 AM
To: Nikzad, Hamid
Subject: Re: EIA standard

I am convinced that the EIA procedure is one of the poorest procedures we have. I attempted to change it in a manner to be more user friendly and incorporated the corrosion issue. The recommended procedure was not accepted as they felt it would cause some administrative problems. So I'm tasked to redo it to relieve that concern. I haven't been able to do much with it due to other priorities but have committed to have another draft ready for the next meeting.

I will probably remove the corrosion issue from this document and add it to another TP which is in existence called "Corrosivity of Plastics," TP 82. This TP does deal specifically with the detection of corrosive elements of plastics and uses a temperature cycling with humidity technique to determine this problem. It has been used successfully for this type of work. I have no problem adding your procedure to it as an additional procedure and do not expect any problems with getting it through. I'll be doing this for the next meeting as well.

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To give it more weight can I use HP name as a cosponsor? Gives more credibility. If that's not possible, I will go forward anyway. Can you send me HP's procedure so I can put in the particulars you would like to see.

For your own information, I did some work a few months ago on pcb's coming in from China as well as US manufacturer and we used both the HP and the TP 82 procedure. Got the same results. The China boards failed both tests with a lot of white residue resulting and the US boards were clean. So both procedures are valid and confirmed.

Regards,

- Prepared memorandum requesting approval to obtain project number and proceed to letter or SP ballot at the discretion of the project leader on 12 June 2009..
- The following e-mail and memorandum was sent to the distribution list on 12 June 2009:

Gentlemen, I have prepared the attached memorandum to revise the subject standard. Please read and reply as soon as possible. This is been done to be responsive to the requested revision and not wait until the fall meeting. Your prompt reply is appreciated. Kind regards, Carl Fritz, chair EIA CE -2.1

MEMORANDUM TO CE-2.0 NATIONAL CONNECTOR STANDARDS COMMITTEE

Re: Revision of EIA-364-82A " Corrosivity of Plastics Test Procedure for Electrical Connector and Socket Housings".

The Chairman of the CE-2.1 subcommittee has received a request to revise the subject standard to include a second test method. The existing method will be identified as Method A, and will also be considered the default method for legacy products. Normally formal committee approval to progress the document would occur during a stated committee meeting. To expedite this requested revision I have prepared this memorandum and not wait until the next scheduled meeting in October 2009.

So that we can proceed without further delay, we ask that you vote to approve the issuance of a project number and to proceed directly to letter or SP ballot at the discretion of the project leader. **Approval of this action does not constitute approval of the change.**

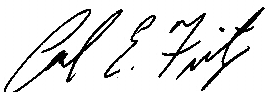
Once we receive sufficient approvals to proceed, you will receive a copy of the ballot and proposed changes for your comment/vote.

Please take the time right now, but not more that 10 days, to return this memorandum stating your preferred action to Cecelia M. Yates and Carl Fritz at cyates@ecaus.org and lumby73@aol.com respectively.

I approve of this action : (Name: _____).

I disapprove of this action: (Name: _____).

Thank you for your assistance in this matter.



APPROVED: Carl E. Fritz, Chairman CE-2.1 Subcommittee

DATE: 12 June 2009

Distribution:

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Ralph Antonelli (Approved 13 June 2009)
David Bouzek (Approved 24 June 2009)
Greg Brown (On the second notice I received a note that Greg was out of the office until 2 July 2009. No reply was ever received from Greg Brown.)
Don Chambers (Approved 13 June 2009)
Bob Druckenmiller (Approved 13 June 2009)
Carl Fritz (Approved 13 June 2009)
H. John Healey (Approved 13 June 2009)
Max Peel (Approved 30 June 2009)
Kevin Rickard (Approved 24 June 2009)
Frank Ruffino (Approved 26 June 2009)

cc: Cecelia Yates (ECA)

Request for approval EIA -364-82A

Sent cover memo (mccwil384 and PINS form to EIA requesting a project number on 21 July 2009 on behalf of Max Peel.

Received project number 22 July 2009 and notified Max Peel.

Sent the standard, cover memo (mccwil386) and Background Data Sheet to EIA for SP ballot on 14 August 2009.

** Past due for 5- year review

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3. TEST PROCEDURES AWAITING PROJECT NUMBERS (BY TP NUMBER)

A. EIA-364-31D, Humidity Test Procedure for Electrical Connectors and Sockets (Max Peel)

Carl Fritz reported that sent Max Peel draft working copies that split this standard into 2 standards on 11 December 2008.

B. TP-79, Insert Bond Strength (Don Chambers)

Kevin Rickard has agreed to take this on as a new project. It was moved by Don Chambers and seconded by Kevin Rickard to obtain a project number and send to EIA for a SP ballot. The motion was unanimously approved. It was also unanimously moved and approved that if there are sufficient ballots and no rejections received that the standard be sent to EIA for EDEC ballot and publication as an EIA Standard. In addition the standard should also be submitted to ANSI for publication as an American National Standard.

- The following is my reply to the e-mail from Don Chambers on 7 May 2009:

Don, I hit the send button before I was done. I was just thinking you may also want to consider eliminating other holes in the mating surface such as alignment pins in large connectors, and jack screw holes. There may be other openings in addition to just cavities. Regards Carl

In a message dated 5/7/2009 5:48:51 PM Eastern Daylight Time, Don.Chambers4@ngc.com writes:

I am not sure how we handle this, but to address Lisa Hoffer's (DSCC-VAI) concern I would propose to alter TP-79 para 4.1 as follows:

Using suitable equipment, an axial tensile load shall be applied to the test specimen. Unless otherwise specified, the load shall be sufficient to cause a stress of 689 kPa \pm 35 kPa (100 psi \pm 5 psi) to the insert assembly bond. The actual axial load required is determined by multiplying the available bond surface area of the test joint by the required stress. **The available bond surface area is the total surface area less the area of any contact cavities.** Unless otherwise specified, for a bonded connector insert assembly, the load shall be increased at a minimum rate of 0.45 kilogram per second (1 pound per second) until the required load is reached. Unless otherwise specified, the required load shall be maintained for a minimum of 30 seconds.

The text in blue is my addition for clarification.

Your thoughts?

Don Chambers

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4. OTHER BUSINESS

A. Current overload

There is a need for this procedure. Max has requested that a project leader be established. In new mil dwg 89065? And a series of contacts the NAC was involved in and referenced in the blade and tuning fork spec.

The committee has agreed to consider this in the future.

B. Check 38999 that are not covered by a test procedure. 26482? See what tests are not unique to a specific specification. Consider developing a TP only if it has multiple applications.

This includes adding a vibration sweep method to the vibration TP-28. This is for residence surge. Spelled out in 38999 clause 4.5.23.2.3.

Electrolytic erosion, spelled out in 38999 clause 4.5.35.

Ralph Antonelli has agreed to provide Carl with a list of tests contained in 38999 that are not covered by a test procedure. Carl has agreed to prepare a draft for the next meeting.

C. TP-66, Shielding Effectiveness (Ralph Antonelli)

Received comments from Deutsch via Don Chambers that were presented at the SAE meeting in October 2008, see TP-66 comments from Deutsch.
(See Attachment No. 9 for Deutsch comments).

Ralph reported that he has requested a copy of a report written by M. L. Crawford and J. M. Ladbury from IEEE that was the basis for TP-66. He will make comparisons and try and resolve any difference after he has an opportunity to review the report.

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- The following was received from Ralph Antonelli on 8 May 2009:

Review of MIL-STD1344, method 3008 and EIA-364-66 Harmonization

Objective:

The objective of this report was to review of the minutes from the harmonization effort of MIL-STD-1344 method 3008 and test procedure EIA-364-66 to:

- a. determine if the minutes from the harmonization effort resolve the questions that differences exist between the two test procedures.
- b. determine if EIA-364-66 requires an update as a result of these differences.

History:

August 1988 – International Symposium on Electromagnetic Compatibility, Report by M. L. Crawford and J. M. Ladbury Titled: "Mode-Stirred Chamber for Measuring Shielding Effectiveness of Cables and Connectors"

TP-66 – was developed based on this report

June 12, 1990 – ANSI approved EIA -364-66 (EMI Shielding Effectiveness Test Procedure for Electrical Connectors)

November 4, 1999 – EIA Special Meeting #9 364/1344 Comparison, Chris Hayes of Naval Air System Command (Navy -AS) "reported that the Navy will adopt EIA-364-66 in lieu of MIL-STD-1344, method 3008 as is."

Only other changes made during the harmonization were either editorial, typographical or for clarification.

May 5 2000 – ANSI approved EIA -364-66A.

October 22, 2004 – Navy -AS Adopts EIA-364-66A.

Report Overview:

Review of M.L. Crawford and J.M. Ladbury report identifies and resolves inadequacies of MIL-STD-1344, method 3008. Some of the inadequacies and resolutions identified are as follows:

1. Design of the mode chamber - Increases Shielding Effectiveness from 60 dB to 100 dB.
2. Design of the tuner - Should be as large as possible. Minimum of 2 wavelengths.
3. Selection and placement of the Antennas - Broadband Ridge Horn antennas (placed in the corners of the chamber) have a lower VSWR and are more efficient in exciting and receiving test fields inside the chamber.
4. Measurement approaches - At frequencies below a few gigahertz the impedance of the antenna and the Equipment Under Test (EUT) become tuner position dependent which affects the measurement accordingly. Mode tuned measurement can be used due to variations in VSWR of the antenna and EUT.

At frequencies above approximately 4 gigahertz the impedance of the antenna become less dependent on tuner position and the mode stirred continuous sample measurement can be used.

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Review of MIL-STD1344, method 3008 and EIA-364-66 Harmonization - Continued

Report Overview - Continued:

The report also states that either a spectrum analyzer or the procedure detailed in section 3.2.2.2 of MIL-STD-1344, method can be used to obtain SE of the EUT. However, in EIA-364-66 only the spectrum analyzer method is detailed.

Of course these issues are discussed in far more detail in the 7 page report and require someone with more expertise than this writer.

Conclusion

TP-66 was developed prior to the harmonization effort and in accordance with the M.L. Crawford, J.M. Ladbury report. Based on this report the Naval Air System Command made the decision to accept and adopt EIA-364-66 as is. The committee might consider evaluating the procedure detailed in section 3.2.2.2 and figure 2 of MIL-STD-1344, method 3008 to determine if it should be included in EIA-364-66. This report may not resolve the questions that prompted this review; this would require someone with expertise in shielding effectiveness testing, however, EIA did provide the test procedure as directed by the Naval Air System Command.

- The following was received from Don Chambers on 29 May 2009:

Ralph,

Sorry this took so long. I ran the changes to TP-66 that were made after the conversion from 1344A 3008 past one of the foremost EMI experts (Mr. C. Kent Jackson of Aerospace Corp) and he concurs that they are not only correct, but also make a better test procedure as a result.

I hope this is all that is needed. If you need anything else on this issue, please let me know.

D. EIA-364-10E, Fluid Immersion

Carl Fritz reported that he received an e-mail from Trevor William (UK) via Don Chambers on 15 December 2008 regarding the addition of a new test fluid for deicing aircraft runways.

Don Chambers and Dave Bouzek will discuss this with Trevor Williams at the SAE meeting in May.

- Carl Fritz sent the following e-mail to Trevor Williams following the meeting.

Trevor Williams, I presented your request to add a new test fluid for deicing aircraft runways at the EIA CE-2.0 meeting on 26 April 2008. Don Chambers and David Bouzek have agreed to discuss this with you at the May 2009 SAE meeting. The committee will act on their recommendation at the October 2009 EIA CE-2.0 meeting. Kind regards, Carl Fritz

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- The following reply was received from Trevor Williams on 1 May 2009.

Hi Carl

Thank you for your response.

I look forward to meeting with Don and Dave (I know both of them well) and I am sure that we will have meaningful discussions.

For interest, the same fluid is causing concern to the cable committees because it is reported to be aggravating arc tracking of cable looms.

Best regards

- The following is Trevor's reply to David Bouzek on 28 May 2009.

Hi Dave

Thanks for the info.

The objective of me raising this issue was to make sure it was in the public domain and being debated somewhere. It is a difficult subject and one to which we will have problems finding answers so I anticipate a slow response

See you in Portland

cheers

Trevor Williams

- The following is my reply to David Bouzek's reply to Trevor Williams on 28 May 2009:

David, Thank you for the followup with Trevor at the SAE meeting. I will await any further action until a decision has been made by SAE regarding the addition of any additional fluids. I will then proceed with any recommendation offered by SAE to revise TP-10. Kind regards, Carl

In a message dated 5/27/2009 6:49:10 PM Eastern Daylight Time, David.Bouzek@tri-starelectronics.com writes:

Trevor,

It was good to see you last week in Florida. I just wanted to copy Carl on this e-mail and let him know that the SAE group was going to work on the fluids a bit more and at this point EIA will hold off until further definition / fluids are presented.

Let me know if you have any other suggested course of action for the EIA folks.

Don – Sorry we missed you in Florida!

Regards,

Dave

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E. J-STD-075 (Requested by Frank Ruffino)

Discuss the merits of developing a TS standard to outline tests necessary to evaluate connectors and determine the PSL (Process Sensitivity Limits) Level in J-STD-075.

J-STD-075 has PSL levels for Wave and Reflow compatible connectors, however there is no evaluation method or criteria specifically for connectors.

The unanimously agreed to take this on as a new project to develop a document to determine the PSL (Process Sensitivity Limits) of connectors as related to J-STD-075. Frank Ruffino has agreed to accept the review as project leader. It was moved by Frank Ruffino and seconded by Kevin Rickard to obtain a project number, and send the standard to EIA for a SP ballot. The motion was unanimously approved. It was also unanimously moved and approved that if there are sufficient ballots and no rejections received that the standard be sent to EIA for EDEC ballot and publication as an EIA Standard. In addition the standard should also be submitted to ANSI for publication as an American National Standard.

F. TP-78A, Cavity – to – Cavity Leakage Bonding Integrity Test Procedure for Electrical Connectors

- Received this e-mail from Don Chambers on 17 March 2009:

In a message dated 3/16/2009 6:04:18 PM Eastern Daylight Time, Don.Chambers4@ngc.com writes:

Carl,

I was looking at TP-78 and noticed something curious. Are the connector end seal plugs supposed to be the same as MS27488?

- My reply to Don on 17 March 2009:

Good morning Don, I am glad to see that you are reading these things. It beats reading the dictionary or phone book. I checked in the original release of TP-78 dated September 1991 and found indeed that in clause 2 it stated that "The appropriate electrical connector end seal plugs similar to MS27488 are suitable for this purpose." I think the reasoning at the time was to include what was in MS27488 in the standard and not chase someone to another document. Also by having the information directly in the standard we would have control of the content, in the event that the military changed MS27488. We did not want to get into the "chicken and egg" situation as to which takes precedence. I think the intent was also to verify that the compliance to the MS is there when this standard is revised. I guess it would not hurt if we indicated the association in the TP as reference information. Worthy of consideration. Hope this answers your question. Carl

The unanimously agreed to take this on as a new project to revise the standard. Don Chambers has agreed to be project leader. It was moved by Don Chambers and seconded by Kevin Rickard to obtain a project number, and send the standard to EIA for a SP ballot. The motion was unanimously approved. It was also unanimously moved and approved that if there are sufficient ballots and no rejections received that the standard be sent to EIA for EDEC ballot and publication as an EIA Standard. In addition the standard should also be submitted to ANSI for publication as an American National Standard.

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G. EIA-364-91 Dust Test

There appear to be a problem obtaining the dust specified in this standard.

Contact: Jeff Fredericks, (952) 894-8737, Jeff@powdertechologyinc.com

This company is considering making the dust.

POWDER TECHNOLOGY, INC.

14331 Ewing Avenue, South

Burnsville, MN 55306

PH: (952) 894-8737

Fax: (952) 894-0734

Toll Free: (800) 718-8737

Other supplier: Sun Belt has not replied to numerous calls.

The committee has agreed to take this under advisement if the supplier agrees to make the dust.

H. TP-83, Shell - to - Shell Conductivity (Kevin Rickard)

The unanimously agreed to take this on as a new project to revise the standard. Kevin Rickard has agreed to be project leader. It was moved by Kevin Rickard and seconded by Don Chambers to obtain a project number for the purpose revising the standard and send out on letter ballot or SP as determined by the project leader. Kevin will present a draft revision at the next meeting.

I. New TP for Ultra Violet Radiation (Don Chambers)

The unanimously agreed to take this on as a project to create a new TP. Don Chambers has agreed to be project leader. It was moved by Don Chambers and seconded by Kevin Rickard to obtain a project number and send out on letter ballot or SP as determined by the project leader.

5. NEW BUSINESS

Respectfully submitted,

Carl Fritz, Chairman CE-2.1