

Synchronous Machinery Subcommittee Minutes of Meeting, June 7, 2004 Denver, CO

1. WELCOME AND INTRODUCTION

The meeting was called to order at 4:00 PM by the chairman, Lon Montgomery. Copies of the agenda were distributed, along with previous minutes, and various WG and liaison reports. (The agenda was also emailed to the membership prior to the meeting. (Attachment #1) The current membership list for the SMSC was circulated and the chairman asked those present to provide corrections and/or additions, or to initial their existing information. There were 16 members and 2 guests. The updated membership list is included as Attachment #2.

2. APPROVAL of 2003 MINUTES

Geoff Klempner moved to accept the minutes of the July 2003 meeting, and Ed Owen seconded the motion. The motion passed without objection.

3. OFFICERS' REPORTS

The chairman, vice chair and secretary provided a brief verbal report of the subcommittee activities. The chairman discussed progress on our 2-year plan. The vice chair passed out a written report (Attachment #3) and discussed the success of the Plenary Sessions at this year's PES General Meeting. The secretary reported that the membership was polled earlier this year regarding SMSC participation. As a result, a new membership roster was developed.

4. CHANGE OF OFFICERS

The officers of the Subcommittee are as follows:
Chairman - Lon Montgomery; Vice Chair - Oleg Wasynczuk; Secretary - William Bartley
The officers are entering their second year of service. In June of 2005, Mr. Montgomery will step down and Dr. Wasynczuk will become chairman. The officers are beginning to search for a new Secretary, and asked for volunteers.

5. WORKING GROUP (WG) REPORTS

- WG-1 Awards and Recognition -
Rik Nilsson submitted a written report, which is included as Attachment #4. In his absence, Rik's report was read aloud to the membership.
- WG-2 Advisory Group to IEC – no report
- WG-3 Generator Rewinds
A draft of a PAR for this new Guide has been developed and will hopefully be approved at the WG meeting on Tuesday, June 8, 2004. If so, the PAR will be submitted to IEEE. William Bartley submitted a written report, which is included as Attachment #5, and provided a verbal summary.
- WG-4 IEEE C50.12 & 13 Revision
Jim Michalec reported that standards C50.12 & 13 have been balloted and there are a number of comments which must be addressed. The WG will meet all day on Thursday, June 10 to resolve these comments. Jim submitted a written report, which is included as Attachment #6.

WG-6 Harmonics in Synchronous Machines

Sheppard Salon, WG chairman presented a brief verbal history of this WG. They sponsored a panel session on this subject 6 or 7 years ago. Professor Salon reported that he has polled the WG members and they recommended that it be disbanded.

WG-7 Revision of IEEE 115

Haran Karmaker (WG chairman) reported that work has begun on the revision of 115. (IEEE 115 was reaffirmed in December 2002, but there is some consensus that revisions might be appropriate.) Haran Karmaker has drafted a PAR, and is soliciting membership in this WG. Haran submitted a written report, which is included as Attachment #7.

WG-8 Revision of IEEE 67, "Operation and Maintenance of Turbine Generators"

Geoff Klempner (WG chairman) reported that the Final Draft has undergone an editorial review by IEEE and is very near to ballot. Geoff submitted a written report, which is included as Attachment #8.

6. LIAISON REPORTS

A. Materials Subcommittee - No report.

B. Excitation Systems Subcommittee - No report.

C. Power System Relaying Committee

Rik Nilsson submitted a written report, which is included as Attachment #9. In his absence, there was no discussion on this subject.

D. Machine Theory Subcommittee - No report.

E. Hydro Power Subcommittee - No report.

F. Induction Machine Subcommittee – No report. Haran Karamaker agreed to inquire about a liaison.

G. IEEE 62 Testing and Inspection Guide

William Bartley reported the Guide was balloted in 2003. Tom Wait, WG Chair and his working group have been working on the resolution of the comments and negative votes. William Bartley submitted a written report, which is included as Attachment #10.

H. CIGRE A101 Study Group

Robert Fenton submitted a written report on the activity of this Study Group. In his absence, Geoff Klempner (who is also in this Group) tried to answer some of the questions about this report. This report is included as Attachment #11.

7. STANDARDS REVIEW AND STATUS

Nirmal Ghai submitted an excellent written report on the status of all the EMC standards. However, there was a general consensus that IEEE C50.12 &13 and IEEE 62.2 should be assigned to the SMSC, as the responsible subcommittee. The Chair agreed to take this to the EMC meeting.

8. OLD BUSINESS

Lon Montgomery distributed copies of a revised SMSC 2-Year plan, (which is included as Attachment #12) This included strategies in electronic communications and "virtual meetings".

IEEE PES Electric Machinery Committee -Synchronous Machinery Subcommittee
Minutes of Meeting, June 7, 2004 Denver

Oleg Wasynczuk led the discussion on the new responsibilities of the SMSC Vice Chair -coordinating all the efforts of the various Working Groups within the SMSC. The Vice Chair has also assumed the responsibility for arranging Paper or Panel Sessions at each PES Annual Meeting. Oleg requested that next year, all WG reports and Liaison reports be sent to the Vice Chair, instead of the Secretary.

William Bartley reported that out of 49 active SMSC members, only 19 are registered with Manuscript Central, plus 4 which are Manuscript Editors. All members were encouraged to sign up and written instructions were offered.

Sheppard Salon submitted a motion that WG-6 be disbanded. Steve Umans seconded the motion, and it was unanimously approved.

9. NEW BUSINESS

Due to the lack of Liaison reports, there was a general discussion among the SMSC members regarding the necessity of future liaisons. There was a consensus that the SMSC chair would raise this issue at the EMC AdCom or EMC Main Committee meeting.

Haran Karmaker presented a motion that a new Working Group # 7 officially be formed to work on the revision of IEEE 115. The motion was passed unanimously.

William Bartley announced the Power Systems Conference in September, (wherein EMC will present papers) the IEMDC meeting in May 2005, (with call for papers) and next PES General meeting in June, 2005, with a call for papers.

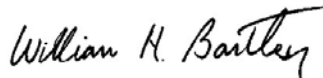
There was no other new business.

10. ADJOURN

The meeting was adjourned at 5:57 PM.

The next meeting of the SMSC is tentatively Monday, June 13, 2005, at the PES General Meeting.

Respectfully Submitted



William H. Bartley
SMSC Secretary

- Attachments:
- 1) Agenda
 - 2) Membership Roster
 - 3) Vice Chair's Report
 - 4) Awards & Recognition WG report
 - 5) WG #3 Report Generator Rewinds
 - 6) WG #4 Report C50.12 & 13 revisions
 - 7) WG #7 Report, Rev of IEEE 115.
 - 8) WG #8 Report, Revision of IEEE 67
 - 9) Liaison Report on Power Systems Relaying
 - 10) Liaison Report on IEEE 62.2
 - 11) Liaison Report on CIGRE Study Group A101
 - 12) SMSC 2-Year Plan

ATTACHMENTS

SYNCHRONOUS MACHINERY SUBCOMMITTEE AGENDA

June 7, 2004 Denver, Colorado

1. Welcome & Introduction
2. Approval of 2003 Minutes
3. Officers' Reports
 - Chairman Lon Montgomery
 - Vice-Chairman Oleg Wasynczuk
 - Secretary Bill Bartley
4. Planned Change of Officers (planned for 2005)
 - Chairman Oleg Wasynczuk
 - Vice-Chairman William Bartley
 - Secretary Candidate being sought
5. Working Group Reports
 - WG 1 Awards & Recognition Rik Nilsson
(Brian Gott's)
 - WG 2 Advisory Group to IEC
successor)
 - WG 3 Generator Rewind Guide William Bartley
 - WG 4 ANSI C50.12 & 13 revision Jim Michalec
 - WG 6 Harmonics in Synchronous Machines Shep Salon
 - WG 7 Revision of IEEE 115 Haran Karmaker
 - WG 8 Revision of IEEE 67 Geoff Klempner
6. Liaison Reports (from representatives of involved Committees)
 - Materials Subcommittee (& DEIS) ?
 - Excitation Systems Subcommittee ?
 - Power Systems Relaying Rik Nilsson
 - Machine Theory Subcommittee ?
 - Hydro Power Subcommittee ?
 - Induction Motor Subcommittee ?
 - IEEE 62 Testing & Inspection Guide Bill Bartley
7. Standards Review & Status Nirmal Ghai
8. Old Business
 - Refinement of 2 year plan for SMSC Lon Montgomery
 - All SMSC members to enroll in Manuscript Central Bill Bartley
 - Clarifying new roles for Vice-Chairman Oleg Wasynczuk
 - Closing Working Groups that are finished or dormant Oleg Wasynczuk
 - SMSC participation by E-conferencing Lon Montgomery
9. New Business
 - Clarifying WG chairpersons Oleg Wasynczuk
 - Clarifying Liaisons to other PES Committees Oleg Wasynczuk
 - Extending existing Working Groups Oleg Wasynczuk
 - Creating new Working Groups Oleg Wasynczuk
 - SMSC Website Update Oleg Wasynczuk
 - Power Systems Conference (Sept 04) Bill Bartley
 - IEMDC 2005 Bill Bartley
 - Next SMSC meeting – PES 2005, June 13, 2005 Bill Bartley
10. Adjourn

ATTACHMENTS

Attachment 2 Roster

SMSC Member	Name	Organization	Address1	Address2	City, State, Zip	Phone
yes	Azuaje, Carlos J.	C.V.G. EDELCA, Altavista	Puerto Ordaz, Edo. Bolivar		VENEZUELA	+58 (286) 960.36.11
yes	Bartley, William H.	Hartford Steam Boiler Inspection and Insurance Co.	One State Street		Hartford, CT 06102-5024	(860) 722-5483
yes	Becker, Kevin		100 East Randolph Street		Wausau, WI 54402-8003	(715) 875-3359 Ext. 4330
yes	Brinsek, Michael W.	Minnesota Power	30 W. Superior St.		Duluth, MN 55802-2093	(218) 722-5642 x 3378
yes	Demerdash, Nabeel A. O.	Marquette University	Dept. of Elec. & Comp. Engineering	Box 1881	Milwaukee, WI 53201-1881	(414) 288-5690
yes	El-Serafi, A. M.	Electrical Engineering Dept.	University of Saskatchewan, Engineering Bldg	57 Campus Drive	Saskatoon, Saskatchewan, CANADA S7N 5A9	(306) 244-6051
yes	Fertoni, Robert	Generation Technology Consultants, Inc.	2135 Cook Rd.		Charlton, NY 12019	(518) 882-9906
yes	Ghai, Nimal K.		10310 Talleyran Drive		Austin, TX 78750	(512) 298-4710
yes	Goff, B. E. B.		3109 Lake Road		Delanson, NY 12503	(518) 864-5485
yes	Gross, Charles A.	Elec. and Computer Engr.	Auburn University		Auburn, AL 36849	(334) 844-1812
yes	Joho, Reinhard E.	ALSTOM Power	Dept. SGCH1		CH-5242 Birr, Switzerland	+41 (56) -466-62-84
yes	Kaminski, Christopher A.	General Electric Company	1 River Road	66-200	Schenectady, NY 12345	(518) 385-5145
yes	Kamva, Innocent	Hydro Quebec (IREQ)	Analyse et gestion des Réseaux	1800 Lionel-Boulet	Varenes, Quebec CANADA J3X 1S1	(450) 662-8122
yes	Kamraker, Haran	General Electric	107 Park St., North		Peterborough, Ontario CANADA K9J 7B5	(705) 746-7734
yes	Keizerbaum, "Izzy" Isadore					
yes	Khan, G. Kheja M.	Savira	Brook Lane		England	+44 (-332) -26-46-40
yes	Kirley, James L.	Massachusetts Institute of Technology	77 Massachusetts Avenue	Room 10-088	Cambridge, MA 02139	(617) 253-2357
yes	Klemper, Geoff S.	Nuclear Safety Solutions	Mail Stop H14 F3		Toronto, Ontario, CANADA, M5G1X6	(416) 592-5651
yes	Kuznetsov, Stephen	Power Superconductor Applications Co.	High Power Laboratory	930 Cass Street	New Castle, PA 16101	(724) 657-9450
yes	Levin, Daniel S.	New York Power Authority			New York, New York	(914) 681-6213
yes	Lipo, T. A.	University of Wisconsin,	Electrical & Computer Engineering Dept	1415 Engineering Drive	Madison, WI 53706	(608) 262-0287
yes	McCown, William R.	Siemens-Westinghouse Power Corp.	The Quadrangle,	4400 Alafaya Trail, DV323	Olando, FL 32826-2399	(407) 735-4789
yes	McGuane, James	Teco Westinghouse Motor Company	5100 N. IH-35		Round Rock, TX 78681	(512) 218-7547
yes	Merkhour, Arezki	Power Systems, GE Canada	107 Park St. N.		CANADA K9J 7B5	(705) 748-7156
yes	Michelec, James R.	American Electric Power	1 Riverside Plaza		Columbus, OH 43215-2373	(716) 223-1776
yes	Montgomery, Lon W.	Siemens-Westinghouse Power Corp.	The Quadrangle	4400 Alafaya Trail, DV323	Olando, FL 32826-2399	(407) 735-4784
yes	Mottershead, Glenn	Voith Siemens	Hydro Generation Services	2185 North Sheridan Way	Mississauga, Ontario CANADA L5K 1A4	(905) 855-0242 (x263)
yes	Neir, N. Kufly	GE PS-Retired				

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SMSC Member	Name	Organization	Address1	Address2	City, State, Zip	Phone
yes	Nehi, Thomas W.		MC 483-478.105	51786 Shelby Parkway	Shelby Township, Michigan 48315	(586) 323-5151
yes	Niedrofer, Gerhard J.	Lilienstrasse 4	CH-5212 Hausen	Switzerland	Bus: +41 (/ 56) -441 54 18 (Tel. And Fax)	
yes	Nilsson, N. E.	Consultant		200 Village Court	Columbiana, OH 44408	330 482 9781
yes	Oliver, James A.	JARSCO Engineering Corp.	18901 State Street		Corona, CA 91719	(909) 735-5239
yes	Org, Raymond	Ballard Power System	15001 Commerce Drive North	Dearborn,	Michigan 48120	(313) 779-6686
yes	Owen, Edward L.	GEI - PSEC	One River Road,	Bldg. 2-647	Schenectady, NY 12345-6001	(518) 385-3012
yes	Phillips, Srinivas		12 Cornell Road		Latham, NY 12110	(518) 783-2088
yes	Rioual, Michel	Electricite de France	Direction des Etudes et Recherches	Service ERMIEL, Departement ME	1, Avenue du General De Gaulle, 92141 CLAMART	+33 (1) 47 65 33 76
yes	Salem, Sam	GE Power Systems	1 River Road	59M-Rm 111	Schenectady, NY 12345	(518) 385-0831
yes	Salon, Sheppard J.	Rensselaer Polytechnic Institute	ECSE Department		Troy, NY 12180-3590	(518) 276-8296
yes	Shah, Wang R.	General Electric Company	Global Research, EP-111	P.O. Box 8	Schenectady, NY 12301	(518) 387-5462
yes	Sivasubramanian, Kiruba	GE Corporate R&D	Niskayuna, NY			(518) 387-7602
yes	Stein, Jan	Electric Power Research Institute	3412 Hillview Avenue, P.O. Box 10412		Palo Alto, CA 94303	(650) 855-2390
yes	Sterros, Ken	Florida Power & Light Company	8100 Eisenhower Blvd		Fl. Lauderdale, FL 33316	561-691-2545
yes	Stranges, Nick	GE Canada	Large Motors Development	107 Park St. N	Peterborough, Ontario CANADA K9J 7B5	(705) 748-7563
yes	Sudhoff, Scott	Purdue University	1285 Electrical Eng. Building		West Lafayette, IN 47906-1285	(765) 494-3246
yes	Toljyat, Herold A.	Department of Electrical Engineering	Texas A & M University		College Station, TX 77843-3128	(979) 862-3004
yes	Urans, Stephen D.	Massachusetts Institute of Technology	77 Massachusetts Avenue	Room 4-206	Cambridge, MA 02139	(617) 253-7351
yes	Walt, Thomas R.	PG&E National Energy Group	345 California Street, Suite 2600		San Francisco, CA 94104	(415) 288-5627
yes	Waszyniak, Oleg	Purdue University	1285 Electrical Eng. Building		West Lafayette, IN 47906-1285	(765) 494-3475
yes	Weaber, Konrad	General Electric Company	Global Research, EP-111	P.O. Box 8	Schenectady, NY 12301	(518) 387-5348
	Mailing List of interested colleagues					
NO	Gardall, Jon		1162 Eastern Ave		Ballston Lake, NY 12019	(518) 882-6405
NO	McLaren, Don	Generator Engineering, Bldg 302	107 Park Street North	Peterborough, Ontario	CANADA K9J 7B5	(705) 748-7924
NO	Nippes, Paul I.	Magnetic Products and Services Inc.	2135 Hwy 35		Holmdel, NJ 07733	(732) 284-6661
	Those members in green are on the Manuscript Central List as Paper reviewers					
	Those in yellow are Editors of Transactions, and generally are not asked to review papers, since they are already contributing to the process					

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Attachment #3
Synchronous Machinery Subcommittee
Vice Chair Report
June 7, 2004

The SMSC sponsored two panel sessions at the PES Summer meeting in Denver: (1) Advances in Design and Modeling of Synchronous Machinery, and (2) Advances in Superconducting Machinery. The second panel session was organized by Dr. Konrad Weeber.

In a recent email from the EMC chair, Professor O. A. Mohammed, each subcommittee, including ours, is required to hold a panel session, paper session, or tutorial at the next general meeting in San Francisco. It is important to be cognizant of: (1) the IEEE requirement that all potential panelists electronically submit a 4-page paper that is reviewed by the session chair, and (2) the corresponding deadlines for their submission.

Efforts are underway to reestablish liaison activities with (1) Materials Subcommittee, (2) Excitation Systems Subcommittee, (3) Machinery Theory Subcommittee, (4) Hydroelectric Power Subcommittee, (5) Induction Machinery Subcommittee, and (6) CIGRE A1.01 Equipment Group. Contacts have been made with the chairs or officers of each of the subcommittees in an attempt to find a suitable candidate to serve as a liaison with SMSC. The present status of this effort is summarized below:

- (1) An email was recently sent to Geoff Klempner to see if Howard Sedding would serve as liaison – awaiting response. Someone should attend the subcommittee meeting (W 1:00-6:00 pm).
- (2) Email contact has been made and subcommittee membership lists have been exchanged with the current chair (OM Malik). The topic will be brought up at his subcommittee meeting on Wednesday 2:00-5:00 pm.
- (3) A verbal contact has been made with the current secretary (S. Pekarek). A liaison is presently being sought.
- (4) Email and verbal contacts have been made and subcommittee membership lists have been exchanged with the current chair (Randall Groves). The topic will be brought up at his subcommittee meeting on Wednesday 9:00-11:30 am.
- (5) Have been unable to make any contact whatsoever with current chair (J. Dymond). Someone should attend the subcommittee meeting (T 4:00-6:00).
- (6) Email and verbal contacts have been made with Mr. Robert Fenton. He indicated that he could not attend Denver meeting but was willing and did submit a written report.

During the sometimes tedious process of identifying and contacting current chairs, it became clear that many subcommittee web sites (including ours) are not kept up to date. Many emails bounced, phone numbers are out of date, officers incorrectly listed, etc. The reporting process could be greatly streamlined if a standardized web page were established for each PES committee/subcommittee. At the subcommittee level, the web page should include as a minimum: (1) a list of current officers, phone numbers, and

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email addresses, (2), (a link to a file of) the current membership list, (3) (a link to a file of) the most recent minutes, (4) the active working groups with contact information for the current chair (or a link to a document that includes this information), and (5) the email address of the Webmaster or person who can update the information posted on the web site. The posted information could be in the form of linked downloadable files (tab-delimited text, portable document format, Excel spreadsheet, or Word document). The web site need not be elaborate and it should be easy for the subcommittee chair, with the help of the secretary, to update the web site (by simply emailing updated documents to the designated Webmaster).

If such a policy were adopted PES-wide, the effort and/or travel requirements required by liaisons would be significantly reduced since the activities of each subcommittee and associated working groups would be readily accessible by members of other subcommittees and/or working groups. Such a policy would also support the trend toward web- or teleconference-based working group meetings. Last but not least, it would greatly simplify the work of the SMSC vice chair.

As part of the new business, the vice chair proposes that the SMSC requests the EMC to adapt an EMC-wide policy and corresponding procedure for all subcommittees to follow in the spirit of the previous discussion.

Respectfully Submitted,

A handwritten signature in cursive script that reads "Oleg Wasynczuk".

Oleg Wasynczuk
SMSC Vice Chair

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Attachment #4

September 17, 2003

Geoff Klempner
Nuclear Safety Solutions
4th Floor
700 University Avenue
Toronto, Ontario, Canada
M5G 1X6

Dear Geoff:

Nomination of SMS Working Group Awards

As the Chairman of the SMS Awards and Recognition Working Group, I am pleased to notify you that the nomination for awards from the SMS is being submitted to the EMC. First, let me thank all the members of the working group for their hard work in supporting this important subcommittee function. The nominations are as follows:

Prize Paper: "End Effect in Linear Induction and Rotating Electrical Machines," by Jan Jamali, *IEEE Transactions on Energy Conversion*, Vol. 18, No. 3, September 2003, pages 440-447.

Service Award: Osama A. Mohammed for distinguished service to the PES as the Electric Machinery Committee Chairman, participation in EMC subcommittees and working groups and IEEE paper reviewer.

By copy of this letter, I am notifying the members of the Awards and Recognition Working Group that nominations are now open for the awards to be nominated in 2004 and that they can forward these nominations to me any time up to May 10, 2004. Again, I want to thank the working group members for their tireless efforts in searching out the best work products from the Synchronous Machinery Subcommittee for recognition.

Should you have any questions, do not hesitate to call me at (330) 482-9781.

Sincerely,

CC: MVKChari, WG Member
VKGarg, WG Member
BEBGott, WG Member
IKerszenbaum, EMC Secretary
LMontgomery, SMS Vice-Chair
TWNehl, WG Member
AMEI-Serafi, WG Member
MShah, SMS Chair
OWasynczuk, SMS Secretary

N. E. Nilsson
SMS Awards WG Chair

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Attachment #5



Date June 1, 2004

TO SMSC

From W H Bartley, Chair of WG#3, Generator Rewinds

This WG convened three meetings in 2003: at the Doble Conference in April, at the July PES meeting in Toronto, and again in September in Indianapolis. The Purpose and Scope of this Guide have been finalized (tentatively), and a draft of a PAR has recently been developed. Before submittal to IEEE, the PAR will be reviewed by the WG at its next meeting, Tuesday, June 8, 2004. Draft 5 of the Guide was recently distributed to WG.

Respectfully Submitted
W.H.Bartley

WG Participants

James R. Michalec -Vice Chair & Secy

Saber Azizi
Peggy Baehmann
Ray Bartnikas
Stefano Bomben
Michael Brimsek
Don Campbell
William Chen
Sudhakar Cherukupalli
Doug Conley
Shawn Filliben
Elton Floyd
Randy Garrett

George Gao
Jim Grant
Bogdan Gronowski
Guy Halldorson
Gary Heuston
Richard Huber
Joe Kisela
Thomas Kluk
Jim Lau
Clyde Maughan
Bill McDermid
Glenn A. Mottershead
W. Howard Moudy

Beant Nindra
Jim A. Oliver
Kent Ogston
Howard Penrose
Lori Rux
Howard Sedding
Greg Stone
Meredith Stranges
James Timperley
Thomas R. Wait
John Wilson
Karim Younsi
Hugh Zhu

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ATTACHMENT #6

Date: May 2004
Subject: Working Group Report
C50.1 Series on Synchronous Machines
From: Jim Michalec
To: Lon Montgomery - Chair SMSC

Both of the C50 documents have been balloted with the following results:

C50.12 – salient rotor units: 61 agreed to vote; 45 affirmative, 1 negative, 1 abstain, 45/46 = 97% affirmative

C50.13 – cylindrical rotor units: 64 agreed to vote; 50 affirmative, 1 negative, 3 abstain, 50/51 = 98% affirmative

The 18 member Working Group is reviewing all ballot comments at the June 2004, PES Annual Meeting in Denver.

At this time, I feel that all of the negative comments can be resolved with the negative ballot. There were also several “technical” comments that we have to review. If we are successful in the negative resolution then we may not have to re-ballot and we can submit to the Standards Board.

Peace,

Jim Michalec

040503 SMSC Report

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ATTACHMENT #7

SYNCHRONOUS MACHINERY SUBCOMMITTEE

Working Group 7 Report

June 7, 2004
Denver

Status of 115:

- Standard 115-1995 has been reaffirmed in 2002.
- A PAR has been submitted for new revisions.
- Revisions are being considered for
 - Noise and vibration testing
 - Tolerances in test methods on losses and parameter
 - Acceleration torque tests
 - Inclusion of index
- A working group would be formed. Interested contributors would be approached.

Regards.

Haran Karmaker

ATTACHMENTS

ATTACHMENT# 8

"KLEMPNER Geoff"
<geoff.klempner@nuclearsafetysolutions.com>

05/03/2004 10:01 AM

To SMSC

With regard to Working Group 8 and P67, it has been sent to the IEEE Standards Editor and I have received their comments back already. And I have already addressed all of them and sent it back to them yet again. It should be ready to be sent out for ballot as soon as I get the word from them. That will be my report to the SMSC. Also, attached is the very latest version of P67.

Regards,

Geoff Klempner

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ATTACHMENT #9

Dr. O. A. Mohammed
Florida International University
10555 West Flagler Street
Room EAS-3983
Miami, FL 33174

Dear Osama:

LIAISON REPORT FROM THE IEEE POWER SYSTEM RELAY COMMITTEE TO THE ELECTRIC MACHINERY COMMITTEE

The IEEE Power System Relay Committee (PSRC) convened three meetings in 2003 at locations away from the IEEE Annual Meeting. These meetings were convened in Scottsdale, AZ (January 13-16, 2003), Raleigh, NC (May 19-22, 2003) and Madison, WI (September 22-25, 2003). The PSRC also met in Tampa, FL from January 12-15, 2004. In accordance with my assignment as the liaison with the PSRC, I have prepared a report for presentation at the Electric Machinery Committee Meeting at the 2004 Annual Power Meeting in Denver, Colorado. A copy is attached.

Upcoming meetings of the PSRC are as follows:

<u>Date</u>	<u>Location</u>
May 17-20, 2004	St. Louis, MO
September 13-16, 2004	Portland, OR
January 10-13, 2005	San Diego, CA
May 23-25, 2005	Columbus, OH
September 22-30, 2005	Calgary, AB

Should you have any questions, do not hesitate to call me at (330) 482-9781 or e-mail me at nilsson@cboss.com

cc: W. Johnson (LASC Chair)
W. Bartley
L. Montgomery
C. Mozina (PSRC)
O. Wasynczuk

N. E. Nilsson

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Attachment #9, pg 2

2003 LIAISON REPORT FROM THE POWER SYSTEM RELAY COMMITTEE TO THE ELECTRIC MACHINERY COMMITTEE

The IEEE Power System Relay Committee (PSRC) convened meetings in January, May and September of 2003. The following items of interest to the Electric Machinery Committee (EMC) were noted and will update the EMC members on the activities of the PSRC.

- Working Group J1 of the Rotating Machinery Protection Subcommittee (RMPS) has is doing final editing of the revised C37.106, Guide for Abnormal Frequency Protection for Power Generating Plants. This document was expected to be published in February of 2004.
- M. Yalla is chairing Working Group J4 of the RMPS which is revising C37.102, AC Generator Protection Guide. Draft 3 was circulated in December of 2003 for comments. Major discussion at the last WG meeting ensued on the two methods of loss-of-excitation protection. There were also comments on the calculations in the annex and on various figures. The WG chair intends to submit the standard for ballot yet in 2004.
- C. Mozina is chairing Working Group J5 of the RMPS which is preparing a paper on generator protection setting criteria. Draft 4 was circulated at the last WG meeting. Discussion ensued on the correct use of "MEL" and "UEL." Capability curves need to show an SSS limit. The use of "OEL" limiting was discussed. It was noted that the underexcitation protection settings are dependent on undervoltage conditions. Consideration is being given to adding curves for 0.95 pu voltage.
- Working Group J6 of the RMPS is also preparing a paper. This paper addresses generator protection during system disturbances. The paper has been accepted by the IEEE for publication in the Transactions. It will be available on the PSRC website until it is published. A question arose as to the August 14, 2003, blackout. The WG believes that there is not enough technical information at this time to warrant an addendum to this paper.
- Working Group J7 of the RMPS has been charged with revising C37.101, Generator Ground Protection Guide. One change that is required is addressing the use of multifunction relays. Other updates will include third harmonic applications. Writing assignments were made and were due to the chair by February 15, 2004.
- J. Gardell is heading up a Task Force on Protection of VFD Motors. One of the topics under consideration is imbedded protection as compared to external protection added to the VFD power circuits.

Respectfully submitted:

N. E. Nilsson
Liaison to the Power System Relay Committee
April 25, 2004

ATTACHMENTS

Attachment # 10

IEEE 62.2 Guide for Diagnostic Field Testing of Electric Power Apparatus- Electrical Machinery

This Guide was balloted in Spring of 2003. WG Chairman, Tom Wait, and a few WG members (J. Lau, R. Ward, and I) have been working on resolving the negative ballots, and making corrections. Many of the requested changes conflicted with one another, and required some compromise. In total, over 150 Corrections have been made to the Guide.

Chairman Wait will circulate the revised guide to the entire Working Group for comment by the end of June. The Recirculation Ballot Letter has also been drafted. Assuming the WG approves the changes, it will go to IEEE for Recirculation Ballot this summer.

Respectfully Submitted
W.H.Bartley

ATTACHMENTS

Attachment # 11

Generation Technology Consultants

Liason Notes: CIGRE Equipment Group A1.01

Last Meeting: Swindon, UK 17 August 2003

Next Meeting: Paris, France 31 August 2004

- 1) The work of CIGRE Equipment Group A1.01- Turbo-generators is primarily performed by either (a) creating questionnaires on topics of interest, circulating them for responses and publishing the results or (b) creating Guides based on the combined expertise of the members. Each of 24 National Committees nominates a member to Study Committee A1. Each National Member can nominate one or more members to Equipment Group A1.01. Davis Berrong is currently the National Member from the USNC CIGRE to A1. US members of A1.01 are Robert Fenton (Convener), James Oliver, Davis Berrong and Brian Gott. Other Equipment Groups in A1 are A1.02 Hydro-generators, A1.05 Non-Conventional Rotating Machines, A1.06 Large Motors and A1.09 Machine System Interaction.
- 2) All A1.01 communications are by email with one annual meeting in conjunction with the A1 meeting.
- 3) At the last meeting there were 17 members and guests present representing 13 countries.
- 4) Discussions on active questionnaires (Working Groups)
 - a) Study of Industry Practices of Testing Generators- R E Fenton (USA). WG-11.01-1b. Final Report approved in 2000. The summary document was finally published in the February 2004 issue of ELECTRA, the CIGRE Magazine.
 - b) On Line Condition Monitoring Tools for Large Turbine Generators- Don Rose/Mal Park (AU) and Generator Hydrogen Supply and Purging Systems – Joseph Petty (UK). Both remain to be published.
 - c) Stressing Turbogenerators Beyond their Established Thermal Limits-R. Joho (Switzerland). (WG_11.01-3). The last summary issued by Reinhard Joho was a combined US/CH Report. This Report was accepted for approval under the six weeks rule. **This Working Group is disbanded.** The discussion centered on the appropriate follow up action. Two suggestions were made:
 - a. A Guide on the considerations of the duty on generator windings based on the responses to this questionnaire combined with the responses to the questionnaires on Stator Winding Integrity by Albert Huber and Aging of Field Windings by R. Fenton/BEB Gott.
 - b. A guide for the purchase of new generator equipment.**SC-A1 action to approve this plan of action. [Action Plan was approved by SC-A1 on 18 September]**
 - d) The Effect of Network Considerations on the Design of Turbine Generators-Trevor Stokes (United Kingdom). (WG11.01-4). The summary produced by Trevor Stokes was accepted and this work was declared complete. **This Working Group was disbanded.** The discussion was on the possible follow up action. It was suggested that this work could be consolidated with the results of the Grid Code questionnaire when complete. IEEE and/or CIGRE papers were suggested. David Wallis pointed out that IEC has currently a revision of 34-3 being balloted for revision that includes many substantial changes. Geoff Klempner pointed out that this is potentially at odds with the revision to IEEE/ANSI C50 which is also being balloted after many changes made to harmonize C50 with former IEC 34. The coordination between the two apparently does not work. **SC-A1 action to approve the final document. [Approved by SC-A1 on 18 September].**
 - e) Guidelines for the Application of Partial Discharge Monitoring Techniques- Howard Sedding (Canada). (WG11.01-5). The summary produced by Howard Sedding was accepted and this work was declared complete. **This Working Group was disbanded. SC-A1 action to approve the final document. [Approved by SC-A1 on 18 September].**

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- f) El Cid Flux Testing-Geoff Klempner (Canada). (WG 11.01-6). The summary issued by Geoff Klempner was discussed with three comments, none considered major. These were (1) to add a sentence that recognizes that other tests may be used, (2) a change in wording proposed by Germany which was a clarification and (3) a request to add a list of references. Mr. Kenneth Riddley who was a guest of A1.01 discussed a number of areas of his past and recent work on this subject. It was agreed that as the changes were minor that the revised document would be issued by 15 October for approval under the six weeks rule. It is expected that approval by 1 December will be achieved. **SC-A1 action to approve this plan of action. [Action Plan was approved by SC-A1 on 18 September]. Once the final revision is issued, this Working Group will be disbanded.**
- g) Method of Determining the Condition of Stator Winding Insulation -Dan Zlatanovic (Romania). (WG 11.01-7). Dan was not present, but had issued his summary prior to the meeting. A set of comments from the USA had been issued by R Fenton in order to clarify many areas. It was agreed that this revision would now be considered the version to work with. In addition it was noted that two additional comments were appropriate, i.e., deleting the reference to epoxy insulation systems and clarifying the meaning of gas analysis. The following schedule was agreed to
1. 31 January 2004 a revised summary will be published
 2. Comments will be due 30 March 2004.
 3. The final ballot will be by email. If no comments, the document is approved. If comments, a subsequent revision will be issued by 31 July for discussion in Paris.
- No SC-A1 action required at this time.**
- h) Experience with the Impact of Gas Turbine and Combined Cycle Development on Turbogenerator Technology- Reinhard Joho (Switzerland) with support by Fenton/ Wallis. (WG 11.01-8). The revised questionnaire was distributed this summer with comments received from the USA and Japan to date. It was noted by Howard Sedding that this questionnaire indicated that some old problems were being rediscovered. The following schedule was agreed to:
1. Responses by 31 January 2004
 2. Summary of responses by 31 May
 3. Comments on Summary by 31 July
 4. Final acceptance in Paris
- No SC-A1 action is required at this time.**
- i) Study of Grid Code Requirements- Brian Gott. (WG 11.01-11). Six responses have been received to date and two responses appear to have gotten lost by sending to Brian Gott's former GE email box. A very good discussion was held. David Wallis pointed out that this questionnaire should be very easy to complete. A revised schedule was agreed to:
1. Responses by 31 October 2003.
 2. Summary by 31 January 2004
 3. Comments on Summary by 30 April 2004.
 4. Revised summary if appropriate by 31 July for acceptance in Paris.
- No SC-A1 action required at this time.**
- j) Guide – Generator Coil Retaining Ring – A Literature Survey and General Guideline-G. Coetzee (South Africa). WG-11.01.2. This Guide was originally presented in Paris 2002. A revised (#3) version was distributed prior to the meeting. Following a discussion by Gert on new work being done in the metallurgy that he would like to include, it was agreed that a revised (#4) version will be issued shortly. The schedule is as follows:
1. Version #4 issued 15 October
 2. Comments by 31 December
 3. Version #5 issued by 28 February 2004
 4. Final comments by 15 May
 5. Version #6 if required by 30 June
 6. Final Approval at Paris 2004

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Additional discussions centered around the need for disclaimers on Guides and the philosophy of including specific acceptable limits in the Guides. The first will be referred to SC-A1 and it was agreed to avoid proposing specific limits. **SC-A1 agreed to take the question of “disclaimers” to the Technical Council.**

- k) Guide on Stator Water Chemistry Management – Gert Coetzee (South Africa). This is an excellent start, but is too chemist oriented. Bob Fenton will provide an engineering introduction. The document also needs references and definitions. It was also noted that it does not broadly cover all the operating philosophies. The schedule going forward is:
1. Additional comments by 30 November
 2. Revision_2 by 31 January 2004
 3. Comments by 30 April
 4. Revision 3 by 31 July 2004
 5. Discussion and possible approval at Paris
- No Sc-A1 action required at this time.**
- 5) **Proposals for new topics of study** The following additional topics were suggested for future Guides
- a. Energization at standstill. (Generator Considerations at Startup)
 - b. Maintenance inspection and test programs
 - c. Generation operation on grids with high harmonics
 - d. On line monitoring
 - e. Commercial interactions and requirements
 - f. Stator winding grounds
 - g. Generator cleanliness
 - h. A questionnaire on A System Approach to Gas Turbine/Combined Cycle Technology and the Impact on the Generator, e.g. static starting etc.
 - i. Follow up work combining the results of the Network Consideration and Grid Code questionnaires when both are complete.
 - j. A questionnaire on the study of “ambient conditions” for high flux testing proposed either as a joint questionnaire with A1.02 or a parallel questionnaire.
 - k. Hydrogen Safety
 - l. Guide- Consideration of Duty on Windings based on the results of 3 CIGRE Questionnaires.
 - m. Hydrogen Safety
- John Linton agreed to chair a working group on Maintenance, Inspection and Test Programs. Michele Verrier will identify a person from ALSTOM-France to support John and Vojislav Skundric also agreed to support John. Yury Vinitzky agreed to chair a working group on the A System Approach to Gas Turbine/Combined Cycle Technology and the Impact on the Generator. Yury asked Bob Fenton and Reinhard Joho to work with him. The schedule will be:
- a. Scope document for approval to A1.01/SC-A1 by 31 December 2003.
 - b. Comments by A1.01 members by 28 February 2004
 - c. Draft questionnaire issued by 31 July for review at Paris.
- SC-A1 Action required to approve 2 new topics, b and h above. [Topics were approved by SC-A1 on 18 September].** It was hoped that someone would work on the project to create a Guide on Energization at Standstill, or the broader topic of Generator Considerations at Startup. No volunteer materialized.
- 6) Next meeting will be on in Paris in August 2004.

Robert E Fenton (USA) Convener

17 May 2004 based on the meeting notes of 18 September, 2003

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Attachment # 12

2 Year Plan for SMSC

11.July.2003 rev c 27.April.2004

In 2 years the following attributes will characterize SMSC:

1. All correspondence will be by e-mail.
2. All members will be registered with IEEE Manuscript Central as reviewers of technical papers, and will be in good standing as reviewers of technical papers.
3. All WG's and Liaison representation will be actively monitored by SMSC vice-chairman.
4. Most WG meetings will allow virtual participation by members. The enabling conferencing technologies will include audio conference by telephone and video conference by internet-aided computer screen view sharing.
5. The SMSC meeting itself will be adjusted to allow for future possible virtual participation by members.