

IEEE Power Engineering Society Entity Annual Report

2014

Entity: Surge Protective Devices Committee

2014 Chair: Ron Hotchkiss

2014 Vice-Chair: Carey Mossop

2014 Secretary: Christine Goldsworthy

1. Significant Accomplishments:

High Voltage Subcommittee – 2014

1. A ballot group has been formed for PC62.82.2 (a revision of Std 1313.2-1999) which is the Guide for the Application of Insulation Coordination. Copyright permissions are being obtained to start the ballot.
2. The ballots for PC62.92.4 (a revision of C62.92.4-1991) which is the Guide for the Application of Neutral Grounding in Electric Utility Systems, Part IV-Distribution, have been completed, the comments have been addressed, and the document has been submitted and approved by the IEEE-SA Standards Board at the December 2014 meeting.
3. The working group on Rotating AC Machines (WG 3.4.9) is working to obtain a chair and additional experts for the working group.
4. A new PAR request is needed for PC62.21.1, the Recommended Practice for the Application of Surge Voltage Protective Equipment on AC Rotating Machinery Rated 1 kV to 30 kV, Generators and Single-Turn Motors, if we are going to proceed with this document.
5. The working group on High Voltage Surge Protection of Generating Plants (WG 3.4.13) is working to obtain a chair for the working group.
6. Work is continuing on the draft of PC62.23, the Application Guide for Surge Protection of Electric Generating Plants. The next steps include forming a new ballot group and balloting the document.
7. Work is continuing to finish the draft, form a balloting group, and ballot PC62.92.1, a revision of C62.92.1-2000, the Guide for the Application of Neutral Grounding in Electric Utility Systems, Part I-Introduction.
8. Work is continuing to finish the draft, form ballot group, and ballot PC62.92.2, a revision of C62.92.2-1989, the Guide for the Application of Neutral Grounding in Electric Utility Systems, Part II-Synchronous Generator Systems.

9. A new project is being considered for work related to PC62.92.6, the Guide for the Application of Neutral Grounding in Electric Utility Systems, Part VI-Systems Rated 1000V and Below.

STATUS OF ACTIVE HIGH-VOLTAGE STANDARDS PROJECTS SURGE PROTECTIVE DEVICES COMMITTEE 2014 - Jim Wilson, HV Standards Coordinator				
	IEEE			
	PROJECT		ASSIGNED	
STD	NO.	TITLE	TO	STATUS
C62.11	PC62.11	STANDARD FOR METAL OXIDE SURGE ARRESTERS	W.G. 3.3.11	IEEE STANDARDS BOARD APPROVED 10/19/2012
		FOR ALTERNATING CURRENT POWER CIRCUITS (>1kV)	J.J.WOODWORTH	PUBLISHED 12/20/2012 DOCUMENT NOW EXPIRES OCTOBER 19, 2022
				IEEE STANDARDS BOARD APPROVED PAR 12/11/13 UNTIL DECEMBER 31, 2017
C62.21		APPLICATION GUIDE FOR SURGE VOLTAGE PROTECTIVE EQUIPMENT ON AC ROTATING MACHINERY >1000 VOLTS	W.G. 3.4.9	IEEE STANDARDS BOARD APPROVED 12/10/03
			NEED WG CHAIR	PUBLISHED 4/28/04 IEEE STANDARDS BOARD REAFFIRMED 3/19/09 DOCUMENT NOW EXPIRES MARCH 19, 2019
C62.21/		APPLICATION GUIDE FOR SURGE VOLTAGE PROTECTIVE EQUIPMENT ON AC ROTATING MACHINERY >1000 VOLTS-	W.G. 3.4.9	IEEE STANDARDS BOARD APPROVED 9/26/08
Cor 1		CORRIGENDUM 1: REPLACE TABLE 2 AND ANNEXES A.1 AND A.2	NEED WG CHAIR	PUBLISHED 12/05/08 IEEE STANDARDS BOARD REAFFIRMED 3/19/09 DOCUMENT NOW EXPIRES MARCH 19, 2019
C62.21.1		RECOMMENDED PRACTICE FOR THE APPLICATION OF SURGE VOLTAGE PROTECTIVE EQUIPMENT ON AC ROTATING MACHINERY RATED 1 KV TO 30 KV, GENERATORS AND SINGLE-TURN COIL MOTORS	W.G. 3.4.9	IEEE STANDARDS BOARD WITHDREW PAR 9/11/2009 AT OUR REQUEST IF DOCUMENT IS STILL WANTED, WE NEED TO PREPARE AND SUBMIT A PAR
C62.22	PC62.22	GUIDE FOR THE APPLICATION OF METAL OXIDE SURGE ARRESTERS FOR AC SYSTEMS	W.G. 3.4.14	IEEE STANDARDS BOARD APPROVED 3/19/09
			T.J. ROZEK	PUBLISHED JULY 3, 2009

				DOCUMENT NOW EXPIRES MARCH 19, 2019
				IEEE STANDARDS BOARD APPROVED PAR 10/21/13 UNTIL DECEMBER 31, 2017
C62.22a		APPLICATION GUIDE OF STATION AND INTERMEDIATE CLASS SURGE	W.G. 3.4.14	IEEE STANDARDS BOARD APPROVED 6/14/13
		ARRESTERS FOR THE SWITCHING SURGE ENERGY CAPABILITY TEST,	T.J. ROZEK	PUBLISHED 6/21/13
		A REPETITIVE SINGLE-IMPULSE WITHSTAND CAPABILITY TEST, AND		DOCUMENT NOW EXPIRES JUNE 14, 2023
		THE INDUCTIVE VOLTAGE DROP AFFECTS OF THE ARRESTER LEAD		
		LENGTHS DETERMINED DURING THE FRONT-OF-WAVE (FOW)		
		DISCHARGE VOLTAGE TEST		
C62.22.1	PC62.22.1	GUIDE FOR THE CONNECTION OF SURGE ARRESTERS TO	IC COMMITTEE	IEEE STANDARDS BOARD APPROVED 12/10/96
		PROTECT INSULATED SHIELDED ELECTRIC POWER CABLES	WG B6W (10-53)	PUBLISHED 6/06/97
			F. JIBRIL	IEEE STANDARDS BOARD REAFFIRMED IN 2003
				DOCUMENT NOW EXPIRES DECEMBER 31, 2018
				BALLOT TERMINATED BY IC COMMITTEE. NEW INVITATION TO BALLOT TO COME
				IEEE STANDARDS BOARD APPROVED IC PAR 12/7/11 UNTIL DECEMBER 31, 2015
C62.23	PC62.23	APPLICATION GUIDE FOR SURGE PROTECTION OF ELECTRIC	W.G. 3.4.13	IEEE STANDARDS BOARD APPROVED 1/18/1995
		GENERATING PLANTS	S.J.HENSLEY	IEEE STANDARDS BOARD REAFFIRMED 12/6/01
			NEED WG CHAIR	DOCUMENT NOW EXPIRES DECEMBER 31, 2018
				BALLOT TERMINATED BY IEEE-SA BECAUSE SIX MONTHS PASSED BEFORE START OF BALLOT
				IEEE-SA SUGGESTED WE LET PAR EXPIRE AND THEN OBTAIN NEW PAR
				IEEE STANDARDS BOARD APPROVED PAR 3/27/14 UNTIL DECEMBER 31, 2018
				NEED TO FORM NEW BALLOT GROUP, & CONDUCT BALLOT
1312	NOW IN C84.1	STANDARD PREFERRED VOLTAGE RATINGS FOR AC	ASC C84	AT OUR REQUEST, IEEE TRANSFERRED COPYRIGHT OF IEEE 1312-1993 TO NEMA ON AUGUST 22, 2005

		ELECTRICAL SYSTEMS & EQUIPMENT OPERATING AT VOLTAGES	DAN WARD	AT OUR REQUEST IEEE STANDARDS BOARD WITHDREW STD 1312-1993 ON 3/28/07
		ABOVE 230 KV NOMINAL		ANSI C84.1-2011 PUBLISHED (INCLUDES INFORMATION OF IEEE STD 1312-1993)
C62.82.1	STANDARD FOR INSULATION COORDINATION -	W.G. 3.4.18	IEEE STANDARDS BOARD APPROVED 12/8/2010	
		DEFINITIONS, PRINCIPLES, AND RULES	I. MORAR	PUBLISHED 4/15/11
				DOCUMENT NOW EXPIRES DECEMBER 8, 2020
1313.2	PC62.82.2	GUIDE FOR THE APPLICATION OF INSULATION	W.G. 3.4.18	IEEE STANDARDS BOARD APPROVED 6/26/1999
	COORDINATION	I. MORAR	PUBLISHED 10/27/99	
				IEEE STANDARDS BOARD REAFFIRMED 6/9/2005
				DOCUMENT NOW EXPIRES DECEMBER 31, 2018
				IEEE STANDARDS BOARD APPROVED PAR 12/8/10 UNTIL DECEMBER 31, 2014
				BALLOT GROUP HAS BEEN FORMED, NEED COPYRIGHT ITEMS TO START BALLOT
				NEED PAR EXTENSION SUBMITTED PRIOR TO OCTOBER 20, 2014
Std 32	PC57.32	REQUIREMENTS, TERMINOLOGY AND TEST	TR COMMITTEE	IEEE STANDARDS BOARD APPROVED 3/21/1972
		PROCEDURES FOR NEUTRAL GROUNDING DEVICES	WG PC57.32	IEEE STANDARDS BOARD REAFFIRMED 12/09/97
			S KENNEDY	DOCUMENT SPONSORSHIP TRANSFERRED TO PES TR COMMITTEE ON 12/11/02
				SPD SUBMITTED DRAFT OF DOCUMENT TO PES TRANSFORMER COMMITTEE
				AT THE TX COMMITTEE REQUEST, IEEE STANDARDS BOARD WITHDREW EXISTING PAR DECEMBER 7, 2011
				IEEE STANDARDS BOARD APPROVED NEW TX PAR DECEMBER 7, 2011 UNTIL DECEMBER 31, 2015
				DOCUMENT NOW EXPIRES DECEMBER 31, 2018

C62.92.1	PC62.92.1	GUIDE FOR THE APPLICATION OF NEUTRAL GROUNDING	W.G. 3.5.7	IEEE STANDARDS BOARD APPROVED 9/21/00
		IN ELECTRIC UTILITY SYSTEMS, PART I - INTRODUCTION	S.G.WHISENANT	PUBLISHED MARCH 30, 2001
			(M.K.CHAMPAGNE)	IEEE STANDARDS BOARD REAFFIRMED 6/9/2005
				DOCUMENT NOW EXPIRES DECEMBER 31, 2018
				IEEE STANDARDS BOARD APPROVED PAR11/02/09 UNTIL DECEMBER 2013
				IEEE STANDARDS BOARD APPROVED PAR EXTENSION 10/21/13 UNTIL DECEMBER 31, 2015
				COMMENTS AVAILABLE FOR REVISION, NEED REVISION DOCUMENT DRAFT FOR BALLOT
C62.92.2	PC62.92.2	GUIDE FOR THE APPLICATION OF NEUTRAL GROUNDING	W.G. 3.5.7	IEEE STANDARDS BOARD APPROVED 2/02/1989
		IN ELECTRIC UTILITY SYSTEMS, PART II - SYNCHRONOUS	S.G.WHISENANT	IEEE STANDARDS BOARD REAFFIRMED 6/9/2005
		GENERATOR SYSTEMS	(S.G.WHISENANT)	DOCUMENT NOW EXPIRES DECEMBER 31, 2018
				IEEE STANDARDS BOARD APPROVED PAR 9/11/09 UNTIL DECEMBER 2013
				IEEE STANDARDS BOARD APPROVED PAR EXTENSION 12/11/13 UNTIL DECEMBER 31, 2015
				COMMENTS AVAILABLE FOR REVISION, NEED REVISION DOCUMENT DRAFT FOR BALLOT
C62.92.3		GUIDE FOR THE APPLICATION OF NEUTRAL GROUNDING	W.G. 3.5.7	IEEE STANDARDS BOARD APPROVED 12/05/2012
		IN ELECTRIC UTILITY SYSTEMS, PART III - GENERATOR	S.G.WHISENANT	PUBLISHED FEBRUARY 22, 2013
		AUXILIARY SYSTEMS	(S.G.WHISENANT)	DOCUMENT NOW EXPIRES DECEMBER 5, 2022
C62.92.4	PC62.92.4	GUIDE FOR THE APPLICATION OF NEUTRAL GROUNDING	W.G. 3.5.7	IEEE STANDARDS BOARD APPROVED 12/05/1991
		IN ELECTRIC UTILITY SYSTEMS, PART IV - DISTRIBUTION	S.G.WHISENANT	IEEE STANDARDS BOARD REAFFIRMED 3/21/02
			(D STEIGERWALT)	DOCUMENT NOW EXPIRES DECEMBER 31, 2018
				IEEE STANDARDS BOARD APPROVED PAR EXTENSION 12/11/13 UNTIL DECEMBER 31, 2014
				RECIRC BALLOT RESULTS 165 APPROVE, 7 NEGATIVE, 9 ABSTAIN, 25 NOT RETURNED
				DOCUMENT ON REVCOM

DECEMBER 2014 AGENDA				
C62.92.5		GUIDE FOR THE APPLICATION OF NEUTRAL GROUNDING IN ELECTRIC UTILITY SYSTEMS, PART V - TRANSMISSION AND SUBTRANSMISSION SYSTEMS	W.G. 3.5.7 S.G.WHISENANT (M.K.CHAMPAGNE)	IEEE STANDARDS BOARD APPROVED 3/19/09 PUBLISHED JUNE 9, 2009 DOCUMENT NOW EXPIRES MARCH 19, 2019
C62.92.6		(GUIDE FOR THE APPLICATION OF NEUTRAL GROUNDING IN ELECTRIC UTILITY SYSTEMS, PART VI - SYSTEMS RATED 1000V AND BELOW)	W.G. 3.5.7 S.G.WHISENANT (S.F.WATERER)	IF DOCUMENT IS STILL WANTED, WE NEED TO PREPARE AND SUBMIT A PAR

Low Voltage Subcommittee – 2014

1. C62.36 *Standard Test Methods for Surge Protectors Used in Low-Voltage Data, Communications, and Signaling Circuits* was published.
2. PC62.72 *Guide for the Application of Surge-Protective Devices for Low-Voltage (1000 V or Less) AC Power Circuits* was balloted April 2014. Ballot resolution is underway.
3. PAR for C62.41.2 *Recommended Practice on Characterization of Surges in Low-Voltage (1000 V and less) AC power circuits* was allowed to expire.
4. PAR approved for C62.72a *Amendment to C62.72*. This amendment will cover the application considerations of SPD disconnectors.
5. PAR approved for C62.62 *Standard Test Specifications for Surge-Protective Devices (SPDs) for Use on the Load Side of the Service Equipment in Low Voltage (1000 V and less) AC Power Circuits*.
6. PC62.52 *Guide for the Application of Surge Protective Devices for a Wind Power Facility* is having a number change to PC62.200 to fall in line with the new document numbering system for the new working groups on emerging technologies.
7. PAR approved for PC62.230 *Guide for Surge Protection of Electric Vehicle Infrastructure*.
8. A revision PAR for C62.36-2014 *Standard Test Methods for Surge Protectors Used in Low-Voltage Data, Communications, and Signaling Circuits* was approved.
9. The ballot process was started for the draft of PC62.33 *Standard Test Specifications for Varistor Surge-Protective Devices*.
10. The ballot process was started for the draft of PC62.34 *Standard for Performance of Low-Voltage Surge-Protective Devices (Secondary Arresters)*.
11. PC62.44 D15.2 *Draft Guide for the Application of Low-2 Voltage (1000 Volts rms or Less) Surge Protective Devices Used on Secondary Distribution Systems (Between the Transformer Low-Voltage Terminals and the Line Side of the Service Equipment)* has been submitted for a recirculation ballot.
12. The recirculation ballot for PC62.69 *Standard for the Surge Parameters of Isolating Transformers Used in Networking Devices and Equipment* started October 10, 2014.

STATUS OF LOW-VOLTAGE STANDARDS PROJECTS

SURGE PROTECTIVE DEVICES COMMITTEE

2014 - Ray Hill, LV Standards Coordinator

STANDARD NO.	TITLE	ASSIGNED TO	STATUS	SASB EXPIRATION
C62.31-2011	Standard Test Methods for Low-Voltage Gas-Tube Surge-Protective Device Components	3.6.1 Wolfgang Oertel	Reaffirmed March 2011 with a 100% approval ballot	March 31,2021
C62.33-1982 (R2000)	Standard Test Specifications for Varistor Surge-Protective Devices	3.6.2 Mick Maytum	PAR expires end of 2015 Draft sent out for the MEC 10/9.	March 31,2018
C62.35-2010	Standard Test Specifications for Avalanche Junction Semiconductor Surge Protective Devices	3.6.2 Mick Maytum	Approved March 2010 with a 96% approval	March 25, 2020
C62.37-2010	Standard Test Specification for Thyristor Diode Surge Protective Devices	3.6.2 Mick Maytum	Reaffirmed March 2010 with a 100% approval ballot	March 25, 2020
C62.37.1-2012	Guide for the Application of Thyristor Surge Protective Devices	3.6.2 Mick Maytum	Published April 2013	December 31, 2022
C62.39-2012	Test Methods for Self-Restoring Current Limiter Components used in Telecommunication Surge Protectors	3.6.2 Mick Maytum	Published January 2013	December 31, 2022
C62.69	Standard for the Surge Parameters of Isolating Transformers Used in Networking Devices and Equipment	3.6.2 Mick Maytum	PAR expires end of 2017; Balloted 11/2013; comment resolution completed; Out for recirculation ballot 10/10.	
C62.42-2005	Guide for the Application of Surge-Protective Components in Surge Protective Devices and Equipment Ports - Overview	3.6.3 Mick Maytum	PAR expires end of 2017	December 31, 2018
C62.42.1	Guide for the Application of Surge-Protective Components in Surge Protective Devices and Equipment Ports - Part 1 Gas Discharge Tubes (GDTs)	3.6.3 Mick Maytum	PAR expires end of 2017; Balloted 10/2013; in comment resolution	
C62.42.2	Guide for the Application of Surge-Protective Components in Surge Protective Devices and Equipment Ports - Part 2 Metal-Oxide Varistors (MOVs)	3.6.3 Mick Maytum	PAR expires end of 2017	
C62.42.3	Guide for the Application of Surge-Protective Components in Surge Protective Devices and Equipment Ports - Part 3 Silicon PN-Junction Clamping Diodes	3.6.3 Mick Maytum	PAR expires end of 2017	
C62.42.4	Guide for the Application of Surge-Protective Components in Surge Protective Devices and Equipment Ports - Part 4 Thermally Activated Current Limiters	3.6.3 Mick Maytum	PAR expires end of 2017	
C62.41.1-2002 (R2008)	Guide on the Surge Environment in Low-Voltage (1000 V and less) AC Power Circuits	3.6.4 Doug Dorr	Reaffirmed 2008 with a 100% approval ballot	December 31, 2018
C62.41.2-2002	Recommended Practice on Characterization of Surges in Low-Voltage (1000 V and less) AC power circuits	3.6.4 Doug Dorr	PAR expired end of 2013 - allowed to expire; will submit a new revision PAR in 2014.	December 31, 2018
C62.41.2 Cor 1-2012	PC62.41.2-2002-Cor_1 IEEE Recommended Practice on Characterization of Surges in Low-Voltage (1000 V and less) AC Power Circuits - Corrigendum 1	3.6.4 Doug Dorr	Published January 2013	December 31, 2022

C62.45-2002 (R2008)	Recommended Practice on Surge Testing for Equipment Connected to Low-Voltage AC Power Circuits	3.6.4 Doug Dorr	Reaffirmed 2008 with a 100% approval ballot	December 31, 2018
C62.41.3 (C62.48-2005)	Guide on Interactions between Power System Disturbances and Surge-Protective Devices	3.6.4 Doug Dorr	PAR expires end of 2016. Revision changing project number from C62.48 to PC62.41.3 approved.	December 31, 2018
C62.72-2007	Guide for the Application of Surge-Protective Devices for Low-Voltage (1000 V or Less) AC Power Circuits	3.6.6 Ron Hotchkiss	PAR expires end of 2015; Balloted April 2014; in comment resolution	December 31, 2018
C62.72a	Amendment to C62.72	3.6.6 Ron Hotchkiss	PAR approved 6/2014. PAR expires end of 2018.	
C62.62-2010	Standard Test Specifications for Surge-Protective Devices (SPDs) for Use on the Load Side of the Service Equipment in Low Voltage (1000 V and less) AC Power Circuits	3.6.6 Ron Hotchkiss	PAR approved 6/2014. PAR expires end of 2018.	December 8, 2020
C62.62a	Amendment to C62.62	3.6.6 Ron Hotchkiss	PAR expires end of 2014	
C62.64-2009	Standard Specifications for Surge Protectors Used in Low-Voltage Data, Communications, and Signaling Circuits	3.6.7 Al Martin	Published December 2009 with a 100% approval ballot	September 11, 2019
C62.36-2014	Standard Test Methods for Surge Protectors Used in Low-Voltage Data, Communications, and Signaling Circuits	3.6.7 Al Martin	Published 2014. PAR for new revision submitted 8/2014.	December 31, 2024
C62.43-2005 (R2010)	Guide for the Application of Surge Protectors Used in Low-Voltage (equal to or less than 1000 V, rms, or 1200 V, DC) Data, Communications, and Signaling Circuits	3.6.7 Al Martin	Reaffirmed (RevCom approved 12/2010) with a 100% approval ballot	December 8, 2020
C62.34-R2001	Standard for Performance of Low-Voltage Surge-Protective Devices (Secondary Arresters)	3.6.9 Ray Hill	PAR expires end of 2014. PAR extension will be requested 10/2014. Ballot Pool being formed. MEC completed. Will ballot 10/2014.	December 31, 2018
C62.44	Draft Guide for Application of Low-Voltage (1000 Volts (rms) or Less) Surge Protective Devices (Secondary Arresters) Used on Secondary Distribution Systems (between the Transformer Low-Voltage Terminals and the Line Side of the Service Entrance Equipment)	3.6.9 Ray Hill	Balloted 10/2011. PAR expires end of 2014. PAR extension will be requested 10/2014. BRC resolution/comments finished and going to WG for approval 10/2014, then out for recirculation ballot.	
C62.50 -2012	Draft Standard for Performance Criteria and Test Methods for Plug-in (Portable) Multiservice (Multiport) Surge-Protective Devices for Equipment Connected to a 120/240 V Single Phase Power Service and metallic conductive communication line(s)	3.6.10 Tony Surtees	Published September 2012	December 31, 2022
PC62.200	Guide for the Application of Surge Protective Devices for a Wind Power Facility	3.6.11 Ken Brown	PAR expires end of 2016; Project No. changed to PC62.200.	
	Photovoltaics Protection Guide	3.6.12 James Moellmann	Working on white paper.	
	Smart Grid Protection Guide	3.6.13 Matt Wakeham	Working on white papers.	
PC62.230	Guide for Surge Protection of Electric Vehicle Infrastructure	3.6.14 Ken Brown	PAR approved 6/2014. PAR expires end of 2018.	

Liaisons Activities:

IEC SC 37B MT1

- Committee draft of IEC 61643 Part 331: Performance requirements and test methods for metal oxide varistors (MOV). IEEE C62.33 and C62.42.2 have both been harmonized with material from this committee draft. Work is progressing towards a 2nd IEC Committee draft...

IEC SC 37B MT2

- Continuing work on IEC 61643 Part 321: Performance requirements and test methods for avalanche breakdown diode (ABD). Work based off of IEEE C62.35 Standard test methods for avalanche junction semiconductor surge protective device components.

ITU-T published Recommendations

Although the IEEE-SA withdrew its ITU-T sponsorship in 2013, the prior work by the liaison member resulted in the following results:

- ITU-T K.95 (02/2014): Surge parameters of isolating transformers used in telecommunication devices and equipment – much of the content based on an SPDC Web site transformer tutorial.
- ITU-T K.96 (02/2014): Surge protective components: Overview of surge mitigation functions and technologies – much of the content based on a SPDC Web site E-Learning tutorial “Introduction to Surge Mitigation Techniques”.
- ITU-T K.99 (08/2014): Surge protective component application guide - Gas discharge tubes – some of the content based on an SPDC Web site GDT tutorial.
- ITU-T K.97 (02/2014): Lightning protection of distributed base stations – Appendix II material “Assessment of the energy delivered to clamping type SPC used in RRU protection module” based on SPDC site Forum discussion and tutorial.
- A further four Recommendations are at the drafting or editorial stage

IEC SC 37B WG3 – Lightning Isolation Transformers

- Committee draft of IEC 61643-Components for Low-Voltage Surge Protection–Part 351: Performance requirements and test methods for telecommunications and signalling network lightning isolation transformers (LIT) is strongly based on the SPDC Web site transformer tutorial material.

IEC SC 37A/WG3

New Liaison Ds were established this year between the following IEEE SPDC Working Groups and IECSC 37A/WG3:

- WG 3.6.11 – Wind Power Facilities Electrical Protection Guide
- WG 3.6.12 – Photovoltaic Facilities Electrical Protection Guide
- WG 3.6.13 – Smart Grid Electrical Protection Guide
- WG 3.6.14 – EVSE (Electric Vehicle Service Equipment) Surge Protection Guide

Joseph Koepfinger represents these SPDC working groups on IEC SC37A/WG3

In addition, the SPDC has Liaison D activities with SC 37B

<u>MT/WG/TF</u>	<u>COMPONENT</u>	<u>Liaison Person</u>
WG3.6.2 - MT-1	GTD/MOV	Leonard Drewes
WG3.6.2 - MT-2	SAD/TSS	Leonard Drewes
TBD 0- WG-3	LIT	Joe Koepfinger

Note: The SPDC has two existing Category D Liaisons, both from WG3.6.2, one to IEC SC37B MT1 and the other to IEC 37B MT2. With the new SC37B WG3, one WG 3.6.2 has Category D Liaisons with every operational group of SC 37B.

Other Existing Category D Liaisons and Liaisons with other Organizations:

IEC SC37A
IEC TC81
IEC TC37
IEC SC37B

Website and Web Presence (pes-spdc.org):

Significant progress has been made in the development of the IEEE PES SPDC Websites. The new home page and file/discussion repository is up and running with great success. SPDC members and interested parties have access to online collaboration through this site.

Website and Web Presence (pes-spdc.org):

2014 saw a significant rise in site traffic due to the continued site evolution towards a fully responsive design to satisfy both desktop and mobile viewing needs, member participation and excellent progress on the [planned site changes](#).

2014 site metrics:

- unique visitors 53,982 (up +340% on 2013)
- visits 94,283 (up +340% on 2013)
- pages viewed 503,700 (up +130% on 2013)
- site server disk space 11 GB and Internet Bandwidth used 55 GB

2014 significant traffic events were:

- Country page views top ten are United States (49 %), Great Britain, France, China, Ukraine, Poland, Russian Federation, Canada, Saudi Arabia, Finland and Romania (good international reach).
- Our highest viewed/downloaded E-Learning Tutorial (11,000 times up +100 % on 2013) was "[Impulse generators for testing low-voltage equipment Rev 2](#)"
- SPDC Luncheon presentations are of high interest, the Florida University E-Learning Lecture on [Lightning](#) received over 7,000 views/downloads.
- The most viewed 2014 Forum new topic was "[New waveshape definitions for 1.2/50-8/20 and 10/700](#) " at 2,638 views.
- Google was our highest linking search engine resulting in 25,927 page hits.

2014 significant site additions were:

[SPDC Newsletter](#)

- ten SPDC Newsletters issued covering the topics of; [PES Resource Center](#), [SPDC Receives the IEEE PES Technical Committee of the Year Award](#), [Website Security](#), [Join.me videoconferencing how to](#), [ICAP](#), [PES 2015 GM](#) and several SPDC meeting information updates all sent to over 400 subscribers.
- SPDC Newsletters are also posted on the Website and each posted issue receives about 200 views.
- A Newsletter Editor training course was created and as a result we have one new qualified Newsletter editor.

[Home page](#)

- From a PES Technical Committee website survey the “best in class” elements found were adopted into a new SPDC home page.
- Feature changes are; an SPDC News picture slider, SPDC officer pictures, increased information about the SPDC and Website presented in a mobile friendly access way by using an accordion click and dropdown menu.

2015 Web site Goals

- Increase traffic through new tutorials, forum discussions and the use of electronic standards development
- Encourage the use of the join.me web meeting tool and come up with the best way of establishing an audio connection.
- Create some training videos on site usage
- Ready the site for the next major release of site software in 2016
- Enhance the e-commerce functionality in the area of meeting facility donations from sponsors.

Participation:

Our emerging technology working groups continue to draw great interest from other technical committees and are creating participation from other countries. We experienced a significant increase in international participation for a number of working groups in 2014 and intend to continue to foster and encourage that effort in 2015.

The low voltage working groups are seeing a high level of participation and attendance. This applies not only to the emerging technology working groups but also a number of the legacy working groups.

The high voltage working groups are seeking additional participation from experts on the covered topics. In particular, the area rotating machines needs additional experts. Utility driven participation appears to be diminishing and additional participation is encouraged as the utility play a significant role in the area of SPDs. Further, a number of working groups in the HV Subcommittee are seeking volunteers working group leadership. There are many opportunities for those who are interested.

2. Benefits to Industry and PES Members from the Committee Work:

The work of the SPDC regarding surge protective devices is used by a number of other technical committees in both the high voltage and low voltage areas. The transmission and distribution industries are highly influence by the standards of the SPDC. For example, C62.11 is the primary high voltage arrester test standard and the industry benefits by its timely and accurate updates. The latest revision will include the latest MOV-type High Voltage SPDs entering the market.

In the low voltage surge protective devices industry, nearly every low voltage SPD manufacturer uses and tests to the standards established by the SPDC. Further, the SPDC has cooperatively worked with other organizations such as Underwriters Laboratories, the Canadian Standards Association and NEMA to coordinate and harmonize the application and testing of surge protective devices within their standards. The SPDC and its members lead standards development in these industries.

The SPDC is working to develop leadership and member training material to prepare current and future members and leaders for larger roles in the Technical Committee's work and in the standards development process. This same effort has been continued by the SPDC leadership's participation in the PES Technical Council Task Forces on Leadership and Member Training.

3. Benefits to Volunteer Participants from the Committee Work:

SPDC participants are provided opportunities to further their education via interaction with their peers in the surge protection industry and are exposed to current best methods in providing protection to systems.

As an example, Christine Goldsworthy was named the Vice Chair of Working Group 3.3.11 and is in training for Chair position over the next few years and is the new Secretary for the Technical Committee. The efforts of the various SPDC working groups provide a definite leadership training benefit.

4. Recognition of Outstanding Performance:

The SPDC would like to thank Antony Surtees for his years of service and leadership as the part SPDC Chair. Tony contributed in many areas and served the committee well providing technical leadership, guidance and direction. Tony was a key contributor to a number of standards as well as bring the committee's Policies and Procedures up to date.

The committee would like to recognize Michael "Mick" Maytum for his continuous devotion to the improvement of the SPDC's online presence and collaboration tools. The SPDC is indebted to Mick for his outstanding contributions. Mick has single-handedly established our very own website/online community where the members can research the activities of the committee and make contributions to standards online.

The SPDC had several conference papers that were selected as "top papers" at the PES General Meeting. These papers were a collaborative effort of many SPDC members.

5. Coordination with Other Entities (PES Committees, CIGRE, standards, etc.):

SPDC is planning joint meetings with IEC TC37 MT4 and MT10 and with CIGRE A3.25 in 2013. The SPDC regularly meets with these groups.

Working Group 3.3.11 is closely coordinated with the IEC TC37 MT4 working group that is responsible for IEC 60099-4 the equivalent to IEEE C62.11. Much of the work between the standard development bodies in this area is being harmonized.

Working Group 3.4.18 on Insulation Coordination is closely monitoring and contributing to the project P1862 on Insulation Coordination for system above 1,000 kV.

The SPDC also interfaces with the Intelligent Grid Coordinating Committee regarding the development of application guidance on surge protection intended for the Smart Grid.

Further, the SPDC was recognized by IEEE-SA as a key point of interest with regard to its efforts on developing standards for Smart Grid.

6. New Technologies of Interest to the Committee:

The Externally Gapped Line Arrester is a new arrester type for the IEEE PES market. It uses both old and new technology to produce a new type of line protection. This area is being investigated by the High Voltage Subcommittee via Working Group 3.3.11.

Additional areas that the SPDC has recently formed working groups and launched projects on emerging technology topics include:

WG 3.6.11 - Wind Power Facilities Electrical Protection Guide

Chair: Kenneth Brown

E-mail: kbrown@leviton.com

Surge protection guidance for electrical equipment and systems with voltages of 1000 V(ac) and 1500 V(dc) or less within a wind power facility or wind generation structure. Included within this scope are communications and data acquisition equipment and associated circuitry and interfaces.

WG 3.6.12 - Photovoltaic Facilities Electrical Protection Guide

Chair: James Moellmann

E-mail: James.Moellmann@schneider-electric.com

Surge protection guidance for electrical equipment and systems with voltages of 1000 V(ac) and 1500 V(dc) or less within a photovoltaic facility or installation. Included within this scope are communications and data acquisition equipment and associated circuitry and interfaces.

WG 3.6.13 - Smart Grid Electrical Protection Guide

Chair: Matt Wakeham

E-mail: matthew.wakeham@gmail.com

Surge protection guidance for electrical equipment and systems with voltages of 1000 V(ac) and 1500 V(dc) or less for components of the Smart Grid. Included within this scope are communications and data acquisition equipment and associated circuitry and interfaces. Additionally, there are cases, which involve smart grid equipment attaching or coupling to higher voltage circuits such as electric utility medium voltage distribution. This scope is not limited to providing guidance for such matters.

WG 3.6.14 - EVSE (Electric Vehicle Service Equipment) Surge Protection Guide

Chair: Kenneth Brown

E-mail: KBrown@leviton.com

Provides surge protection guidance for electrical equipment and systems with voltages of 1000 V (ac) and 1500 V (dc) or less involved with electric vehicle infrastructure. Included within this scope are communications and data acquisition equipment and associated circuitry and interfaces.

8. Significant Plans for the Next Period:

Working Group 3.3.11 of the High Voltage Subcommittee plans to include more paper presentations, tutorials and start the inclusion of transmission line arresters into the C62.11 standard. The C62.11 standard is a highly used standard in the industry.

The SPDC will look further into incorporating testing and application guidance for DC-based SPDs for various applications including “DC in the home” or “DC in the building” to coordinate with the upcoming efforts in the industry.

Our emerging technology working groups are drawing great interest from other technical committees and creating participation from other countries. We experienced a significant increase in international participation for a number of working groups in 2013 and intend to continue to foster and encourage that effort in 2014.

A major and extensive revision to C62.72 is expected this year. C62.72 is the Guide for Application of Surge-Protective Devices (SPDs) for Use on the Load Side of the Service Equipment in Low Voltage (1000 V and less) AC Power Circuits. This will be accompanied by the new release of C62.44, the Guide for Application of Surge-Protective Devices (SPDs) for Use on the Line Side of the Service Equipment in Low Voltage (1000 V and less) AC Power Circuits. These two documents used in tandem will provide low voltage power SPD user and specifiers a wealth of information.

Further, additional work is being done in the area of SPD Disconnectors. The Low Voltage Subcommittee Task Force on Disconnectors is completing its initial report on the subject. This information will be incorporated into an amendment of C62.72. The area of SPD Disconnectors is an important application, performance and safety issue that has been a developing technology in recent years. Significant improvements have been made in these areas.

2014 Goals for pes-spdc.org (SPDC Website)

- Increase traffic through new tutorials, forum discussions and the use of electronic standards development
- Make proposals and give training materials on home videoconferencing
- Update the site design to be responsive, making it mobile/desktop compatible, see http://en.wikipedia.org/wiki/Responsive_web_design
- Continue to maintain and look at ways of improving our online meeting registration and payment site
- Utilize the tools provided by the IEEE Standards Association to assist with online collaboration and meetings

Future Meetings:

Spring Standards Development and Committee Meeting - May 18-22, 2015 – Bahia Resort Hotel, San Diego, CA – All Subcommittees and Working Groups will meet.

Fall Standards Development and Committee Meeting - October 19-23, 2015 (To be confirmed) – Location to be determined – All Subcommittees and Working Groups will meet.

For additional details, please visit www.pes-spdc.org.

Submitted by: Ronald W Hotchkiss, Chair

Date: January 10, 2015