



EOS/ESD ASSOCIATION, INC. STANDARDS DEVELOPMENT

VOCABULARY & ACRONYMS

- American National Standards Institute (ANSI)
- Board of Directors (BoD)
- Business Unit Manager (BU Manager)
- Headquarters (HQ)
- Meeting Activity Report (MAR)
- Standards Committee (STDCOM)
- Standards Procedure Manual (STDMAN)
- Task Teams (TT)
- Technical and Advisory Support Committee (TAS)
- Working Group (WG)
- Work-in-Progress (WIP)

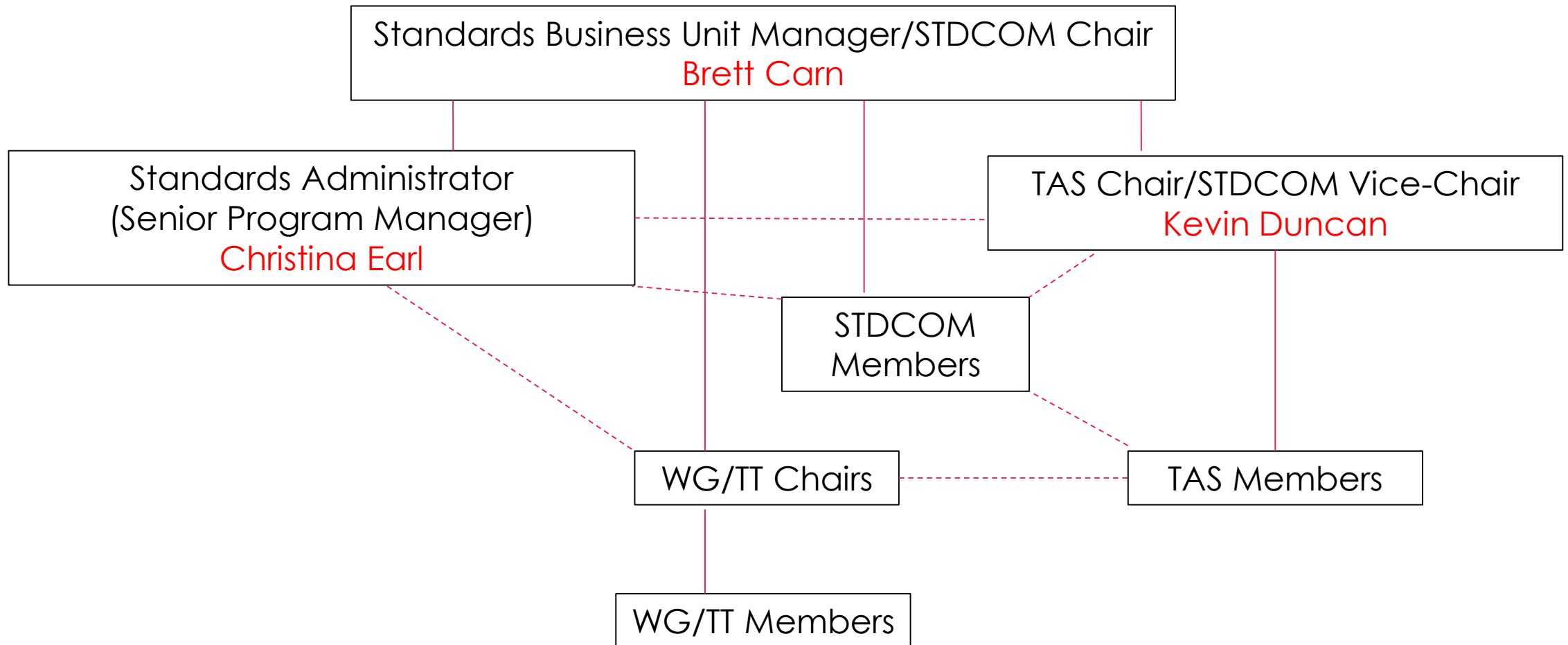
STANDARDS STRUCTURE



STANDARD PROCEDURES MANUAL (STDMAN)

- The ESD Association is accredited by ANSI and STDMAN is an ANSI approved document (7/29/2014).
- It defines:
 - Organizational structure
 - Membership criteria
 - Membership responsibilities
 - Meeting structure and
 - Standards development process
- Major changes are approved by STDCOM and the ESDA BoD and are document and submitted to ANSI for approval.

STANDARDS FAMILY TREE



STANDARDS BU MANAGER / STDCOM CHAIR

Selection

- Appointed by the President of the ESD Association with the advice and consent of the ESDA Board of Directors.

Responsibilities:

- Leadership and direction for the overall operation of the Standards Business Unit.
 - Setting priorities
 - Developing forward-looking plans
 - Strategies for the standards organization
- Ensuring STDMAN procedures are being adhered to.
- Membership approval for chairs and members of TAS, WGs, and TTs.

STANDARDS ADMINISTRATOR

Selection:

- Full-time ESDA Headquarters Staff Position

Responsibilities: (A LOT!)

- Administrative activities of the Standards Business Unit.
- Maintenance, communications and membership for STDCOM, TAS, and WG/TT.
- STDCOM, TAS, and WG/TT Chair meetings, action items and documentation.
- ANSI forms for approval of ESDA documents as American National Standards.
- Conformance and maintenance of the ESDA style guide (format requirements).
- Ensuring forms required by ANSI are maintained (More to come).
- Vote-by-mail, industry review & adjudications between STDCOM, TAS and WG/TT.
- Standards development budgets, site management and meeting schedules.
- STDMAN, confidentiality policy, anti-trust policy and patent policy.
- Patent disclosures and relevant patent information related to ESDA documents.
- Yearly STDMAN compliance with ANSI *Essential Requirements*.
- Assessment responsibilities during the ANSI five-year review audit.
- Initiation and maintenance of 5 year review cycles for published documents.

STDCOM VICE CHAIR / TAS CHAIR

Selection:

- Appointed by the Standards BU Manager.

Responsibilities:

- Ensuring STDMAN procedures are being adhered to.
- Leading and facilitating TAS meetings.
- Approval of documents before elevation to next steps.
- Selection of TAS members with advice/consent of the Standards BU Manager.
- Developing 5 year plans for future WG/TT activities.
 - Not to be confused with the five year cycle required by ANSI for review, revision, reaffirmation, and withdrawal of published documents.

TECHNICAL AND ADVISORY SUPPORT (TAS)

Membership:

- Appointed by TAS chairperson with approval from the Standards BU Manager.

Responsibilities:

- TAS provides continuous technical support and advisory services to STDCOM, WGs, and TTs.
 - Ensuring STDMAN procedures are being adhered to.
 - Work statements (purpose/scope) for approval for new standards.
 - Adjudicating comments received via industry review and STDCOM.
 - Design of experiments, selection and determination of round robin test labs and pass/fail criteria.
 - Review of documents before submission to TAS Chair.
 - Monitoring progress of document 5-year plans.

STANDARDS COMMITTEE (STDCOM)

Membership:

- Attend two consecutive face-to-face meetings of STDCOM as a guest, submit a written membership request to the Standards Administrator (addressed to the Standards BU Manager).
- Outline your current job responsibilities, provide a statement regarding why your interested and verification of company support for participation.
- Approval of membership request is based on a balance between interest groups.
- No one interest group may exceed 50% of total committee membership.

Responsibilities:

- STDCOM Members review, approve and publishes all WIP, draft and final standards, test methods, and standard practices.
- Review and provide written comments (as necessary) on all documents for vote.

INTEREST CATEGORIES

User (Currently have 11 members [35%]):

- Describes an individual working for a company that handles ESD sensitive devices, establishes internal ESD programs for their own use, and procures ESD related products and materials.

Supplier/Manufacturer (Currently have 13 members [42%]):

- Describes an individual working for a company whose primary mission involves the manufacturing or selling of ESD related product, materials or test equipment that support the user community.

Consultants/General Interest (Currently have 7 members [23%]):

- This category consists of individuals:
 - a. Whose primary mission is to provide consulting services.
 - b. Who have an interest in ESD but do not fall into one of the other defined categories.

WORKING GROUP / TASK TEAM – CHAIR(S)

Membership:

- The WG or TT Chair(s) is appointed by the Standards BU Manager.

Responsibilities:

- Produce a test procedure or method for each standard, test method, standard practice, or technical report within the confines of a pre-established purpose and scope.
- Meeting activity report (MAR), meeting minutes, action items and member attendance.
- Adjudicating comments resulting from votes from STDCOM members and those provided during the industry review process.
- Ensure that all support information (e.g., initial lab and round robin testing, MARs, data analysis, etc.) is sent to the Standards Administrator for filing.

WORKING GROUP / TASK TEAM - MEMBERS

Membership:

- WG/TT members are selected by the WG/TT Chair(s) with the advice and consent of the Standards BU Manager.
- Attend two consecutive meetings as a guest, request membership via the Standards Administrator, attend at least two out of three consecutive meetings to retain membership.
- Based on:
 - a. Subject knowledge.
 - b. Willingness / availability to work on the standards project.
 - c. Ability to work as part of a team.

Responsibilities:

- Contribute knowledge, experience and expertise on the subject matter.
- Aid in each step of the document development process.
- Participate in data collection and round robins.

FACTORY WORKING GROUPS

Contact standards@esda.org for more information.

WG 1.0 – Wrist Straps

WG 2.0 – Garments

WG 3.0 – Ionization

WG 4.0 – Worksurfaces

WG 6.0 – Grounding

WG 7.0 – Flooring

WG 8.0 – Symbols

WG 9.0 – Footwear

WG 11.0 – Packaging

WG 12.0 – Seating

WG 13.0 – Handtools

WG 15.0 – Gloves

WG 17.0 – Process Assessment

WG 19.0 – High Reliability ESD Control Processes
(formerly Aerospace)

WG 20.20 – ESD Control Program

WG 21.0 – Flat Panel Display

WG 23.0 – Electrical Overstress (EOS) Best Practices

WG 27.0 – Automotive EOS

WG 53.0 – Compliance Verification

WG 97.0 – Footwear and Flooring Systems

TT – ANSI/ESD S20.20/JESD 625B Harmonization

DEVICE OR SPECIFIC NICHE WORKING GROUPS

Contact standards@esda.org for more information.

WG 5.0 – Device Testing

JWG – Human Body Model (HBM) Device Testing

JWG – Charged Device Model (CDM) Device Testing

WG 5.4 – Transient Latch-up (TLU) Device Testing

WG 5.5 – Transmission Line Pulse (TLP) Device Testing

WG 5.6 – Human Metal Model (HMM) Device Testing

WG 14.0 – System Level ESD

WG 18.0 - Electronic Design Automation (EDA)

WG 22.0 - ESD Foundry and IP ESD Parameters

WG 25.0 – Charged Board Events (CBE)

WG 26.0 – System ESD Modeling

WHY BECOME A WG MEMBER?

- **You are a valuable resource!**
- Standardization is important! – Testing, Conformance, etc.
- Networking with ESD professionals and industry experts.
- Involved in WIP documents, know what's happening first.
- Learn best practices, state of industry and technology advances, forecasts of trends and technology roadmaps.
- Benchmark your operation against practices of other companies.
- Reduce costs, solve problems faster.
- Professional development, job performance enhancement, motivation.

MEMBERSHIP

- Membership to a committee is by individual not by company.
- Membership is requested through the Standards administrator.
- Must attend at least two consecutive working group meetings.
- Once you are approved for membership to a committee you must attend at least two out of three consecutive meetings to retain your membership.
- STDCOM
 - Approval of membership request is based on a balance between interest groups. No one interest group may exceed 50% of total committee membership.
 - There may be more than one member from a company as long as each member can demonstrate independent interests and authority to make independent decisions in the area of the activity of the committee, each may apply for membership.
- WGs
 - There may be more than one member from a company on a WG but diversity is strongly considered when approving more than one member from a company.



GUESTS

- All of our Standards working groups are open to the public.
- Guests are a valuable resource because they have an interest or a stake in what the WG is working on.
- Guests are encouraged to join in the discussions.
- Guests who have a presentation or information they would like to share with the WG should contact the WG chair or ESDA headquarters prior to the meeting to arrange for time on the agenda.
- If you know someone who may be interested in something a WG is doing, please invite them to join our next meeting or send their contact information to the WG chair and ESDA headquarters so a personal invitation can be sent.

MEETING SCHEDULE

2018

April. 10-15

June 18-29

Sept. 17-22

Peppermill Resort & Casino, Reno NV

Virtual Meeting Series

Peppermill Resort & Casino, Reno NV

2019

January 21-February 1

April 8-14

June 10-21

September 9-14

Virtual Meeting Series

Riverside Convention Center, Riverside CA

Virtual Meeting Series

Riverside Convention Center, Riverside CA

2020

January 20-31

April

June 15-26

September 8-12

Virtual Meeting Series

Peppermill Resort & Casino, Reno NV

Virtual Meeting Series

Peppermill Resort & Casino, Reno NV

ESDA STANDARDS WEBSITE

- <https://www.esda.org/committees/standards-working-groups/>
- Individual WG pages
 - Documents assigned to the WG
 - Meeting agendas for upcoming meetings
 - Meeting activity summaries from previous meetings
- Upcoming meeting schedules
- Standards policies



ELECTROSTATIC DISCHARGE ASSOCIATION CONFIDENTIALITY POLICY

Applicable to Committee Members, Guests & Visitors

Effective 6/1/2004, all committee members, guests and visitors to all ESD Association Standards related meetings must adhere to the following Confidentiality Policy.

The information developed and discussed at any ESDA standards meeting is considered to be confidential and is **not** to be disseminated to any other standards development organization.

Work-in-Process (WIP) documents are to be distributed to committee members only.

Any standards committee or working group member that violates this policy will be removed as a member of the ESDA standards committee. If this policy is violated by a guest or visitor to a standards or working group meeting that individual will be barred from attending any future standards meeting.

ANTITRUST POLICY

The penalties for violating antitrust laws can be quite severe, including large fines and even imprisonment of individuals found guilty of illegal conduct. Contrary to the popular belief that the government has relaxed antitrust enforcement, in recent years the Justice Department has recommended jail sentences for the majority of persons convicted of violating antitrust laws. Moreover, the U.S. Supreme Court has ruled that a trade association may be held legally responsible for the unauthorized, as well as authorized, acts of its members. Accordingly, every effort must be made to avoid even the appearance of impropriety.

The most common violations of the antitrust laws are agreements among competitors to fix prices or allocate customers. As for the ESD Association, the most important thing to keep in mind is that its purpose is to “advance the theory and practice of Electrostatic Discharge (ESD) avoidance”. This is accomplished through publishing Standards, holding technical conferences and providing certification programs. Accordingly, it is not the business of the ESD Association to consider or discuss matters relating to product development, marketing, purchasing, or pricing decisions of individual companies.

It is the responsibility of each ESD Association member that attends an ESD Association sponsored event or meeting, to avoid raising improper subjects for discussion. This reminder has been prepared to ensure that participants in ESD Association meetings are aware of this obligation.

Antitrust Laws as related to the ESD Association:

- Do not preclude any discussion on any topic that is pertinent to the business of the ESD Association
- Avoid the misuse of the standard development process in order to gain an unfair competitive advantage.
- Do not allow for improper conduct during a standards meeting.
- Restricts what can be divulged
- Restricts some actions of the ESD Association, such as, conspiring to capture market share
- Allows for activities that have a “pro-competitive” or positive effect

Discussions to Avoid:

- License Terms, price or pricing policy of your individual company
- Direct or indirect sales, quotas, market share
- Identified individual company statistics, inventories
- Particular competitors or customers
- Commercial Liabilities, warranties or guarantees
- Anything dealing with “arm twisting”, excluding or controlling competition

10.0 PATENT POLICY

Policy regarding the use of patented items in ESD Association Standards documents shall be as outlined in the most current ANSI Essential Requirements.

Current ANSI Patent Policy

3.1 ANSI patent policy - Inclusion of Patents in American National Standards

There is no objection in principle to drafting an American National Standard (ANS) in terms that include the use of an essential patent claim (one whose use would be required for compliance with that standard) if it is considered that technical reasons justify this approach.

Participants in the ASD/ANSI standards development process are encouraged to bring patents with claims believed to be essential to the attention of the ANSI-Accredited Standards Developer (ASD).

If an ASD receives a notice that a proposed ANS or an approved ANS may require the use of such a patent claim, the procedures in this clause shall be followed.

3.1.1 Statement from patent holder

The ASD shall receive from the patent holder or a party authorized to make assurances on its behalf, in written or electronic form, either:

- a) assurance in the form of a general disclaimer to the effect that such party does not hold and does not currently intend holding any essential patent claim(s); or
- b) assurance that a license to such essential patent claim(s) will be made available to applicants desiring to utilize the license for the purpose of implementing the standard either:
 - i) under reasonable terms and conditions that are demonstrably free of any unfair discrimination; or
 - ii) without compensation and under reasonable terms and conditions that are demonstrably free of any unfair discrimination.

Such assurance shall indicate that the patent holder (or third party authorized to make assurances on its behalf) will include in any documents transferring ownership of patents subject to the assurance, provisions sufficient to ensure that the commitments in the assurance are binding on the transferee, and that the transferee will similarly include appropriate provisions in the event of future transfers with the goal of binding each successor-in-interest.

The assurance shall also indicate that it is intended to be binding on successors-in-interest regardless of whether such provisions are included in the relevant transfer documents.

3.1.2 Record of statement

A record of the patent holder's statement shall be retained in the files of both the ASD and ANSI.

3.1.3 Notice

When the ASD receives from a patent holder the assurance set forth in 3.1.1.b above, the standard shall include a note substantially as follows:

NOTE – The user's attention is called to the possibility that compliance with this standard may require use of an invention covered by patent rights.

By publication of this standard, no position is taken with respect to the validity of any such claim(s) or of any patent rights in connection therewith. If a patent holder has filed a statement of willingness to grant a license under these rights on reasonable and nondiscriminatory terms and conditions to applicants desiring to obtain such a license, then details may be obtained from the standards developer.

3.1.4 Responsibility for identifying patents

Neither the ASD nor ANSI is responsible for identifying patents for which a license may be required by an American National Standard or for conducting inquiries into the legal validity or scope of those patents that are brought to their attention.

STANDARDS DEVELOPMENT



STANDARD (S)

- A **precise** statement of a **set of requirements** to be satisfied by a material, product, system or process that also specifies the procedures for determining whether each of the requirements is satisfied.

Examples:

ANSI/ESD S1.1 - Wrist Straps

ANSI/ESD S4.1 - Worksurfaces Resistance Measurements

ANSI/ESDA/JEDEC JS-001 - Human Body Model (HBM) - Component Level

ANSI/ESDA/JEDEC JS-002 - Charged Device Model (CDM) - Component Level

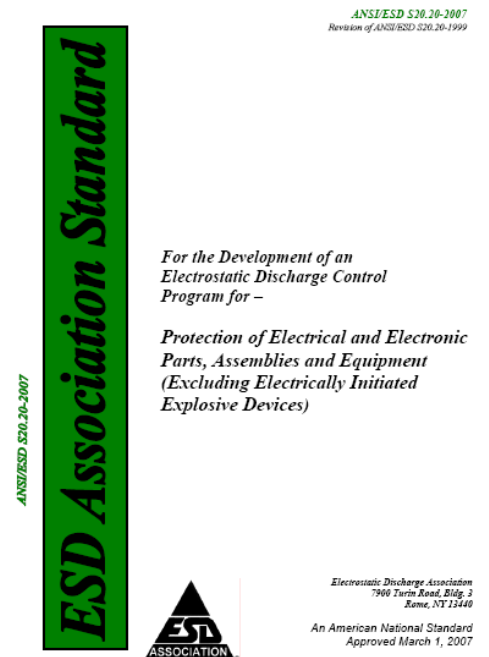
ANSI/ESD S6.1 - Grounding

ANSI/ESD S8.1 - Symbols - ESD Awareness

ANSI/ESD S11.4 - Static Control Bags

ANSI/ESD S20.20 - Protection of Electrical and Electronic Parts, Assemblies & Equip

ANSI/ESD S541 - Packaging Materials for ESD Sensitive Items



STANDARD TEST METHOD (STM)

- A **definitive procedure** for the identification, measurement and evaluation of one or more qualities, characteristics or properties of a material, product, system or process **that yields reproducible test results.**

Examples:

ANSI/ESD STM2.1 - Garments

ANSI/ESD STM3.1 - Ionization

ANSI/ESD STM7.1 - Floor Materials - Characterization of Materials

ANSI/ESD STM9.1 - Footwear - Resistive Characterization

ANSI/ESD STM11.11 - Surface Resistance of Static Dissipative Planar Materials

ANSI/ESD STM11.12 - Volume Resistance of Static Dissipative Planar Materials

ANSI/ESD STM11.13 - Two Point Resistance Measurement

ANSI/ESD STM11.31 - Bags

ANSI/ESD STM12.1 - Seating - Resistive Measurement



ANSI/ESD STM97.2-2016
Revision of ANSI/ESD STM97.2-2006

*For the Protection of Electrostatic
Discharge Susceptible Items*

*Footwear/Flooring System – Voltage
Measurement in
Combination with a Person*



Electrostatic Discharge Association
7900 Turin Road, Bldg. 3
Rome, NY 13449
An American National Standard
Approved November 17, 2016

STANDARD PRACTICE (SP)

- A **procedure** for performing one or more operations or functions **that may or may not yield a test result**. If a test result is obtained it may not be reproducible.

Examples:

ANSI/ESD SP3.3 - Periodic Verification of Air Ionizers

ANSI/ESD SP3.4 - Periodic Verification of Air Ionizers Using a Small Test Fixture

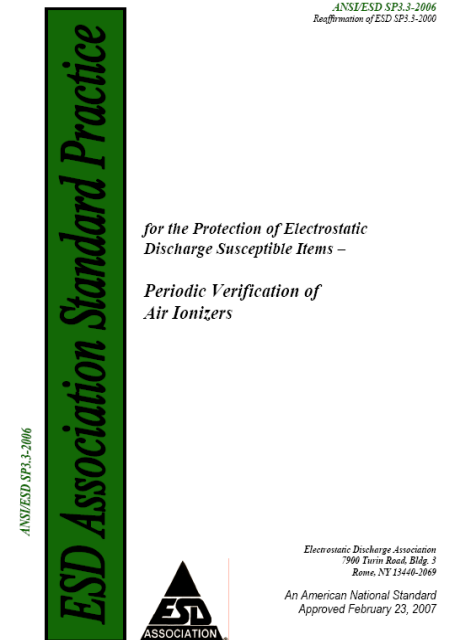
ANSI/ESD SP5.5.2 - Very Fast Transmission Line Pulse (VF-TLP) - Component Level

ANSI/ESD SP5.6 - Human Metal Model (HMM) - Component Level

ANSI/ESD SP10.1 - Automated Handling Equipment (AHE)

ANSI/ESD SP14.1 - System Level Electrostatic Discharge (ESD) Simulator

ANSI/ESD SP15.1 - In-Use Resistance Testing of Gloves and Finger Cots



TECHNICAL REPORT (TR)

- A collection of **technical data or test results** published as an **informational reference** on a specific material, product, system or process.

Examples:

ESD TR1.0-01-01 - Survey of Constant (Continuous) Monitors for Wrist Straps

ESD TR2.0-01-00 - Consideration for Developing ESD Garment Specifications

ESD TR2.0-02-00 - Static Electricity Hazards of Triboelectrically Charged Garments

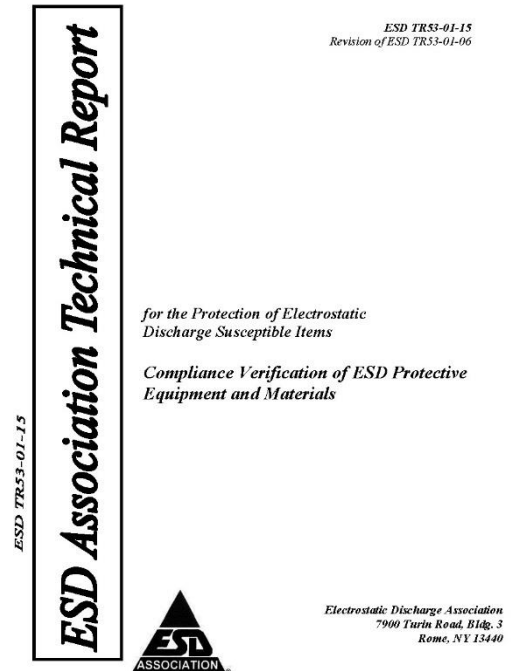
ESD TR3.0-02-05 - Selection and Acceptance of Air Ionizers

ESD TR4.0-01-02 - Survey of Worksurfaces and Grounding Mechanisms

ESD JTR001 - User Guide of JS-001 Human Body Model Testing of ICs

ESD TR20.20 - Handbook

ESD TR53 - Compliance Verification of ESD Protective Equipment and Materials



PROPOSAL TO START A WIP

1. A proposal of an identified need is brought to the STDCOM chair.
 - Can be from a current WG, a WG member or any interested party.
2. The proposed need is then reviewed by TAS.
 - Upon TAS approval it is assigned to a WG.
3. Initial research may be started to determine the scope of the document.
4. A work statement (purpose/scope) is completed by the WG.
 - Reviewed by TAS and the Standards BU Manager for approval.
5. A Project Initiation Notification System (PINS) form is filed with ANSI.
6. Work begins on the document.

ANSI PINS FORM

Project Initiation Notification System (PINS) form:

- Initiates an announcement in ANSI's *Standards Action* publication that includes:
 - Explanation of the need for the project.
 - Identification of stakeholders (i.e., end users).
- Provides interested parties and stakeholders an opportunity to participate in the development activity, or notify the Standards developer of any conflicts.
 - It does not prohibit another standards developer from pursuing a similar project.
- There is no document completion timeline associated with the filing of a PINS.
- If the proposed document is not completed there is no action to take regarding the filed PINS form.

WIP TO DRAFT STANDARD

1. WG finishes the WIP document.
2. Reviewed by TAS.
 - Changes needed => Back to WG with comments.
 - No changes needed => TAS approval provided.
3. Standards Admin prepares the document for 30-day STDCOM “vote-by-mail”.
4. After the 30-day voting period, all of the comments are reviewed and categorized.
 - Technical comments are reviewed by TAS and guidance provided to the WG.
5. WG adjudicates all comments which are reviewed by TAS Rep and TAS chair.
6. Once adjudication is complete:
 - A formal reply is provided with the WG’s response and any actions taken.
7. Did the WG make technical changes as a result of the vote and comments?
 - Yes => Back to the WG and WIP stage. (Limited Ballot?)
 - No => A Draft Standard is produced.

INDUSTRY REVIEW TO FULL STANDARD

1. Identification of interested parties to participate in an industry review.
2. Format, preparation and distribution the document for industry review.
3. Board of Standards Review Form 8 (BSR8) is filed with ANSI.
4. Close of industry review.
5. After the 30-day review period, all of the comments are reviewed and categorized.
 - Technical comments are reviewed by TAS and guidance provided to the WG.
6. WG adjudicates all comments which are reviewed by TAS Rep and TAS chair.
7. Once adjudication is complete:
 - A formal reply is provided with the WG's response and any actions taken.
8. Did the WG make technical changes as a result of the vote and comments?
 - Yes => Back to the WG and WIP stage. (Limited Ballot?)
 - No => A BSR9 is filed with ANSI; upon approval document is published.

ANSI BSR8 FORM

Board of Standard Review Form 8 (BSR8) form:

- Initiates an announcement in ANSI's *Standards Action* publication that notifies interested parties and stakeholders that a document is available for a 30-45-day public review and comment period.
- Is initiated when a document is published for industry review.
- Includes:
 - An explanation of the need for the project
 - The scope of the document
 - Information on obtaining a copy of the document, and
 - Where comments should be submitted.

ANSI BSR9 FORM

Board of Standard Review Form 9 (BSR9) form:

- Submitted to ANSI for final approval after a document has gone through the ESDA standardization process.
- Provides evidence of consensus and demonstrates compliance with ANSI's *Essential Requirements*.
 - If there are no questions or unresolved negative votes or comments, then the ANSI Procedures & Standards Administration (PSA) staff is authorized to approve the document.
 - Any abnormalities or questions are forwarded to the BSR for review.
- A document must be published within six months of ANSI approval.

FIVE-YEAR REVIEW

1. All ANSI/ESD documents must be reviewed at least every 5 years.
2. Four Years after ANSI approval, the five year review begins.
3. The current document, any style manual changes as well as comments received (if any) are provided to the WG.
4. WG reviews the document:
 - Does it meet current industry needs?
 - Are there changes in industry practices?
 - Were there any comments received? Etc.
5. Are technical changes needed?
 - Yes => Document returns to WIP and revision begins.
 - No => Document is sent for STDCOM reaffirmation vote.

FIVE-YEAR REVIEW (REVISION)

If technical changes are needed:

1. A PINS form is filed with ANSI to announce to the industry our intention to revise the document.
2. WG makes the necessary revisions and completes any required testing to support the technical changes.
3. The document development process starting from the WIP stage is followed.
 - STDCOM Vote - Full Review
 - Industry Review

FIVE YEAR REVIEW (REAFFIRMATION)

If NO technical changes are needed:

1. A BSR8 form is filed with ANSI to announce our intention to reaffirm the document to the industry and solicit comments.
2. STDCOM Vote (Approve as written, disapprove with comment or abstain)
 - Any and all changes to the document are highlighted
 - Is typically conducted at a STDCOM meeting
3. Technical comments are reviewed by TAS and guidance provided to the WG.
4. WG adjudicates all comments which are reviewed by TAS Rep and TAS chair.
5. Once adjudication is complete:
 - A formal reply is provided with the WG's response and any actions taken.
7. Did the WG make technical changes as a result of the vote and comments?
 - Yes => Back to the WG and WIP stage.
 - No => A BSR9 is filed with ANSI; upon approval document is published and new five year cycle begins.

CURRENT DOCUMENTS IN WIP – (NEW)

- SP3.5 Test Methods for Air Assist Bar Ionizer, Soft X-ray (Photon) Ionizers, & Alternative Room Ionization
- SP5.3.3 CC-TLP
- SP5.4.1 Transient Latch-up
- SP10.2 Automated Handler Measurements
- SP17.1 Process Assessment
- TR18.0-02 EDA
- SP19.1 High Reliability Control Program
- TR21.0-01 Flat Panel Displays
- TR22.0-02 IP Foundry/ESD Parameters
- SP27.1 Automotive EOS Workflow

CURRENT DOCUMENTS IN WIP – (REVIEW)

- S1.1 Wrist Straps
- STM4.1 Worksurfaces/Resistance
- STM4.2 Worksurfaces/Charge Dissipation
- JS-002 Joint CDM
- SP5.6 HMM
- STM7.1 Flooring
- SP9.2 Footwear – Foot Grounders
- STM11.13 Two-Point Resistance
- STM11.31 Bags
- STM15.1 Gloves and Finger Cots
- TR53 Compliance Verification
- S541 Packaging

GLOBAL HARMONIZATION

Joint Electron Device Engineering Council (JEDEC)

- ANSI/ESDA/JEDEC JS-001, Human Body Model (HBM) - Component Level
- ANSI/ESDA/JEDEC JS-002, Charged Device Model (CDM) - Component Level
- Adhoc Working Group – JESD625B (ANSI/ESD S20.20)

International Electrotechnical Commission (IEC)

- | | | |
|---------------------------------------|----|----------------|
| • ANSI/ESD STM7.1 – Flooring | => | IEC 61340-4-1 |
| • ANSI/ESD STM9.1 – Footwear | => | IEC 61340-4-3 |
| • ANSI/ESD STM97.1&2 – Foot/Floor | => | IEC 61340-4-5 |
| • ANSI/ESD S1.1 – Wrist Straps | => | IEC 61340-4-6 |
| • ANSI/ESD STM3.1 – Ionization | => | IEC 61340-4-7 |
| • ANSI/ESD STM2.1 – Garments | => | IEC 61340-4-9 |
| • ANSI/ESD S20.20 – Control Program | => | IEC 61340-5-1 |
| • ANSI/ESD S541 – Packaging | => | IEC 61340-5-3 |
| • ANSI/ESD S11.31 – Shielding Bags | => | IEC 61340-5-8 |
| • ANSI/ESD STM11.13 – Two Point Probe | => | IEC 61340-5-10 |

ACKNOWLEDGMENTS

THANK YOU TO KEVIN DUNCAN

He gave an excellent year in review standards business unit presentation at the 2017 EOS/ESD Symposium. His presentation provided a much needed refresh to this bi-annual standards overview presentation.



QUESTIONS??

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