Used properly, standards can be effective tools in a static control program.

Economic pressures, device densities, new technologies, and an increased reliance on outsourcing are just a few of the ongoing indicators of change in electronics production. And ESD control has a key role in coping with some of these changes facing the industry.

In meeting the complex challenge of reducing ESD losses, standards are playing an increasing role in reducing marketplace confusion in the manufacture, evaluation, selection of static control products and implementation of static control programs. Standards help to ensure lot-to-lot consistency for static control products and provide a means of objective evaluation and comparison among competitive ESD control products. Standards help reduce conflicts between users and suppliers of ESD control products and are used in developing, implementing, auditing, and certifying ESD control programs.

Standards, however, should be viewed simply as tools, and like any tool, effectiveness is often a function of how well the tool is used. When properly used to drive a nail, a hammer ensures that siding adheres to the frame of a house. A swollen thumb is vivid testimony to the hammer's misuse. Current industry conditions demand that all available tools be put to good use. Wasting time and money is out of the question. The following is a set of guidelines for effective use of standards.

First, evaluate and select standards that are appropriate for your specific applications. In the US, use of standards is generally voluntary, although their use may be written into contracts or purchasing agreements between a buyer and seller. In much of the rest of the world, the use of standards is usually compulsory, and they often have the force of law behind them. Manufacturers should carefully consider and make the right decision when given the option to use, or not use, standards. Good decisions are based on good information and analysis of need. Use those standards applicable to your manufacturing environment, and confusion will be greatly reduced and efficiency will improve.

Second, understand the difference between a standard and a test method, and use each accordingly. The term "standard" is often used to refer to all standards-related documents, but significant differences exist in the different types of documents. A true standard is a precise statement of a set of requirements to be satisfied by a material, product, system or process: the electrical resistance of a worksurface, for example.

Usually, a standards document also specifies the procedures (test methods) for determining whether each of the requirements is satisfied. For instance, you can specify that the worksurfaces in your facility meet the requirements outlined in a standard.

A test method is a definitive procedure for the identification, measurement and evaluation of one or more qualities, characteristics or properties of a material, product, system or process. For

example, you can specify that the worksurfaces have a specific resistance level when measured according to the test method, but you cannot specify that the worksurfaces meet the requirements of the test method, because the test method normally doesn't contain the actual specification for the product being tested.

You'll avoid a lot of conflicts in purchasing and in program implementation when you use the right type of document for the specific application.

Third, understand what the standard covers and what it doesn't. Usually this type of information is found in the scope of the document. If the scope says the document covers worksurfaces with a resistance to ground of 106-109Ω, then the document is not applicable for materials requiring 1010Ω or more. If the scope indicates the document applies to facilities that manufacture explosives, then it may not be applicable to facilities that manufacture semiconductor devices. A thorough understanding of the document's scope will prevent the purchase of incompatible products and the implementation of a faulty manufacturing procedure.
Fourth, learn the detailed provisions of the standard. If the document specifies resistance, then you would not select a material based on its resistivity. If the test method specifies the application of 100V when measuring resistance, you may need to replace your resistance meter that applies 500V.

Finally, be specific and clear in all communications. If a potential material supplier provides confusing specifications, ask questions and get clarification. If evaluating materials using a specific test method, reference that test method correctly in program documentation. And, always make sure to include appropriate staff in communications: vendors, customers, production managers, and the purchasing department.

Used properly, standards can be important and effective tools in your static control program.

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