

Anti-Static Footwear Tester

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Abstract

Static Electricity generated by the human body while working can cause serious injury and damage to equipment and materials being handled and used. To eliminate and reduce the build-up of static charges, one of the control measures employed in industry is the use of anti-static footwear. These footwears are designed to conduct body charges to the ground while maintaining a sufficiently high level of resistance to protect the wearer from electrical hazard due to live electrical circuit.

This type of footwear has a growing demand in the semiconductor industry. To respond to the need for anti-static tested shoes, the Center developed a testing equipment for classifying shoes according to established safety standard for static dissipative footwear - ANSI Z41.1-1989. The static dissipative footwear testing equipment measures the resistance of the footwear through the application of 50 volts DC while ensuring the safety of the operator.

The testing equipment has a built-in internal resistance of 1 mega ohms and current limiting device to ensure current handled will not exceed safe level. The tester is designed with 5-minute timer that automatically stops the test and sound the buzzer to indicate the conclusion of test.

This testing device is the first equipment developed by the Center, but, because of the ever changing technology, the Center should therefore endeavor to continue to perform practical researches to meet the need of new types of technical services by the industry.