

ESD CONSULTING SERVICES PLT

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Course Title: Basic ESD

Introduction

The course begins with an introduction to ESD. Advancement in the field of electronics has made gadgets more compact, faster and cheaper. This has resulted in indirectly resulted in electronic components that are becoming more and more sensitive to ESD. Fundamentals of ESD covers the important concepts of ESD such as concepts of Faraday caging, laws of induction etc. These concepts are critical in order to understand how ESD becomes a threat to our electronic industries. Armed with the important concepts of ESD, the course then focus on how to prevent and protect ESD sensitive components.

Duration

1 Day (9 am to 5 pm)

Who should attend

Lead Operators, Trainers, Supervisors and other administrative personnel.

Training Outcome

On completion of training, participants will be able to:

- Understand the basic concepts and fundamentals of ESD.
- Understand the causes of ESD, how will ESD damage sensitive parts & how materials will affect ESD.
- Understand Basic ESD controls in a manufacturing environment.

How will participants learn

The course is practically orientated with numerous examples and demos in order to help the attendees understand the course. Participants are encouraged to participate and ask questions during the session. It is recommended that the size of the class be 25 or less participants in order to enable enough attention and time allocation for the subject matter to be well understood. Each participant will be provided a handout.

Course Contents

1. Introduction to ESD

- a. -What is ESD?
- b. -What does ESDS stands for
- c. -Common examples of ESD events
- d. -How ESD damage cost millions of dollars to your company?

2. Causes of ESD

- a. -What is triboelectric charging?
- b. -What is inductive charging?
- c. -Triboelectric series
- d. -Major factors affecting static generation
- e. -Effects of humidity in ESD

3. How does ESD damage your sensitive part?

- a. -How human induce ESD damage?
- b. -What is catastrophic failures?
- c. -What is latent failures?

4. How does material affects ESD?

- a. -Introduction to the various types of material
- b. -Role of conductors
- c. -How static dissipative material helps in ESD control
- d. -Why insulators are the worst enemy in ESD control?
- e. -Range of voltage susceptibility versus typical devices
- f. -Average static losses by different categories of manufacturers

5. Basic ESD controls

- a. -Grounding requirements
- b. -How does wrist strap works?
- c. -Use of conductive smocks to protect ESD damage
- d. -Work surface requirements for ESD control
- e. -Use of conductive flooring in ESD control
- f. -Wearing of conductive shoes or heels straps
- g. -How does ionizers assist in ESD control?
- h. -What role do you play to control ESD in your factory?
- i. -What are the DOs and DON'Ts in ESD control?
- j. -What are the benefits for you and your company when you practice strict ESD control in your factory?