

# ESD & Cleanroom Dust Contamination Control

## Seminar 2019

Date : 10<sup>th</sup> July 2019

Speaker : Mr. Shinichi Yamaguchi & Mr. Shigeo Iwasa

Venue : Vistana Hotel, Bukit Jambul, Penang.

213 Jalan Bukit Gambir, 11950, Bukit Jambul, Penang, Malaysia.

Do not miss out the great opportunity to attend this ESD and Cleanroom Dust Contamination Control seminar co-organized by Ace Star and Shishido. It is a seminar with slides presentation as well as experimental demonstrations to enhance your understanding of ESD and Cleanroom Contamination Control. Attendance is Free Of Charge (F.O.C), by invitation only from Organizer.

### Seminar Content

Open 9:30AM to 10:00AM (Registration & Morning Coffee Time)

#### 1. (10:00AM to 12:00PM) A More In-Depth Discussion Of ESD Control

- About Electrostatic
  - The commonly misunderstood Static Charge Behavior (Coulomb, Capacitance & Voltage)
  - Clean Room Level with Choice of Items (ISO and Federal Standard)
  - Rubbing, Separation and Induction Charge
  - ESD Control Level and Real Case in Japanese Manufactures (IC and PCBA)
  - Control Items & Digitization of Measurement Data
    - 1) Field Meter & Electrostatic Voltmeter
    - 2) Target Size with Measurement Distance
    - 3) Evaluation Ionizer (CPM)
    - 4) ESD Event Detection
- ESD Solution Trend
  - ESD Defect Model (HBM-CDM-SDM-CBE-CDE)
  - Latent Problem
  - Induction Charge by Ionizer
- Choosing The Right Solution
  - Types of ionizers (AC/DC/HF/Pulse/HDC-AC)
  - Dissipative Materials (Uniformity/Homogeneity)

#### Lunch Break (12:00 ~ 1:00pm)

#### 2. (1:00PM to 1:30PM) Clean Room Compatible Ionizers

- Non Particle Emission Fan Type Ionizer from Fan motor
- Low Particle Emission Fan Type Ionizer from Fam motor
- Particle Generation From Emitter Pin
- Fan Type Ionizer of Clean Room Compatibility
- Contamination from Dissipative Material

#### 3. (1:30pm to 1:45pm) Q&A - ESD Control

#### 4. (1:45PM to 3:15PM) Cleanroom Dust Contamination Control Part 1

- Fundamentals of Cleanroom Contamination Control
  - Definition of Dust & Contamination and also

- Defective product
- Dust & Contamination at Production Environment
- Contamination Generated by Manufacturing Equipment
- Particles and Dusts Generated from materials
- Dust & Contamination from Operator
- Contamination Control Technic at Production Line
  - Size of Particles
  - 4 Important Fundamental Rules for Clean Room Contamination Control
  - Principle of Clean Room
  - Understanding Particles Behaviors
  - Clean Class & Size of Particle
  - The operator is one of the largest sources of Contamination
  - Zoning
  - Clean Room 4 Principles & 5 S
  - Control Air Flow

#### Tea Brake (3:15PM to 3:45PM)

#### 5. (3:45PM to 5:15PM) Cleanroom Dust Contamination Control Part 2

- Visualization of Particles
  - Illuminance
  - Contrast
  - Dust Deposition Mark
  - Particle collections and analysis
- How to eliminate Particles
  - Importance of Cleaning
  - Utilization of Positive & Negative Air Pressure
  - How to use Wiper
  - Cleaning Tank (Bath) Maintenance
  - Importance of Equipment Maintenance
  - Simplification of Cleaning Process
- Contamination Control Success Case

#### 6. (5:15PM to 5:45PM) Q&A - Cleanroom Dust Control

#### 7. (5:45PM to 6:00PM) Wrapping Up and Closing Event

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## About the speakers:



**Mr. Shinichi Yamaguchi**

Shishido Electrostatic LTD

3-1-1 Higashi-Yukigaya Ohta-Ku, Tokyo 145-0065, Japan

E-mail: s\_yamaguchi@shishido-esd.co.jp

Mr. Shinichi Yamaguchi has been working at Electrostatic Measurement Company for 33 years as a sales engineer and marketing. He also familiar at Asian market for 19 years. He has 25 years of experience in ESD control application in Japan. Well known as a specialist in ESD control, he is the Chief ESD Control Coordinator (registration # ESDC-11-0015), a qualified instructor of ESD Control Certification Seminar and a qualified Inspector of ESD Control Factory Inspector by Reliability Center for Electric Components of Japan (RCJ).

In the past, Yamaguchi has successfully conducted ESD Seminars with Factory Diagnoses to more than few thousands persons in Asian countries. He is Co-Chairman of IDEMA Japan ESD Control subcommittee, a committee member JIS standard (IEC-TC 101), a member of SEMI Japan ESD Task Force and Vice President of Japan ESD Association.

He is very familiar with major LCD, IC, LED, HDD and Assembling manufactures in Japan and Asia at ESD control measurement application about Ionization, Electrostatic Voltage Measurement, Surface Resistance, Grand condition and ESD Event Detection.



**Mr. Shigeo Iwasa**

Consultant of Cleanroom and ESD solutions

Mr. Shigeo Iwasa worked at Akai Electric Co., Ltd., and acquired skills in press processing, machining, audio head production, audio assembly, and video assembly.

And He was stationed at AKAI ELECTRIC FRANCE S.A. as an audio and video production engineer.

After return Japan, he joined Stanley Electric Co., Ltd., and he study Clean room technologies and ESD technologies as a researcher at Research Institute. He is also familiar with Corporate strategy and Technology strategy.

He has built a new education system to educate more than 3,000 employees within the Stanley group, including Japan in injection molding, painting, machine assembly, semiconductor production, electronic component assembly, and a wide variety of production processes. He has led and promoted defect reduction activities for all production bases including Southeast Asia, Europe, the United States and China for more than 15 years, and has achieved great results.

Also he has participated in the construction of a new plant from an early stage plan, and has been involved in the construction of seven plants in Japan and three plants overseas.

He is the Chief ESD Control Coordinator (Registration # ESDC-11-0028)

His professional lectures conducted on clean factory technology and electrostatic control technology are very popular both in domestic Japan and worldwide.

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