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South East Asia Technical Conference on Electronics Assembly –2015

“Vital Technology Trends impacting SMT Assembly – What you need to know Today to Survive Tomorrow”

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OVERVIEW

As the industry adopts novel approaches towards creating higher levels of integration demanded by today's small but powerful products, it opens up new frontiers in materials, components and technology. In turn, these pose unique spin-offs in issues and challenges for SMT assembly and reliability. Understanding the top trends and issues confronting the industry and current state-of-the-art practices is vital for every SMT professionals in order to stay ahead.

ABOUT THIS COURSE

This program focuses on key priorities and trends based on real-life needs expressed by attendees. Leading edge assembly areas cover 01005 process challenges, Plasma Etching & Cleaning Applications and Conformal Coatings – practices, materials, equipment and processes. Emerging reliability threats address areas such as Tin Whiskers, Creep Corrosion, PCB Pad Cratering– what it is, how to recognize it, impact and mitigation practices. Lastly it examines the futuristic field of Embedded Passives.

TARGET AUDIENCE:

The target audience would comprise Engineering Professionals in Process Planning, Process Development, Failure Analysis, and 'Industry Watch' personnel.

TOPICS COVERED

1 – ASSEMBLY TRENDS

- 01005 Assembly
 - Sizing, Specs. and Tolerances
 - DOE – Variables Matrix and Results
 - Filtering Results
 - Recommendations
- Plasma Stripping and Cleaning
 - Principles
 - Application Scope
 - Stripping & Etching Applications
 - Equipment & Configuration
 - Measuring and Improving Cleaning Efficacy
- Conformal Coatings
 - Science and Application
 - Material properties and selection
 - Process and Equipment Set-up
 - Results

2 – RELIABILITY ISSUES

- Creep Corrosion
 - What Is It and Causes
 - Appearance Examples
 - How it Differs from Electro Migration
 - Impact – How, Where and who
 - Mitigation Practices
 - Design Recommendations
- Tin Whiskers
 - Impacts
 - Cause Hypothesis
 - Assessing Risk
 - Current Mitigation Practices
- PCB Pad Cratering
 - What it is and its Causes
 - How Serious and Why it Impacts
 - Assessment Methods
 - Findings and Recommendations

3. EMERGING TECHNOLOGY

- Embedded Passives
 - Function and Scope
 - Process Options
 - Impacts – Limitations & Cost
 - Future

4. CONCLUSION

- Further Reading & Helpful Resources
- References

Mukul Luthra's Bio

Mukul Luthra is the CEO of Waterfall Technologies, since its start up in 1997 in Singapore and in Canada in 2000. Amongst the previous positions he has held include Director, Seagate Technology and Marketing Director, ST Microelectronics.

He is extensively published, has presented and conducted training workshops at numerous international conferences such as the IPC/APEX, SMTA International, Nepcon, ICSR and GlobalTronics events.

Mukul graduated with a Degree in Electrical Engineering in 1974 and has 4 decades of international experience in high volume manufacturing, quality & process engineering fields in the PCBA, Disk Drive and Semiconductor industries.