



# HALT & HASS SEMINAR & WORKSHOP

SEPTEMBER 13-14

This two-day seminar is intended to introduce HALT & HASS to those who want to learn enough about the methods to perform them very well, with no additional assistance.

It is also intended to prevent practitioners from committing the most frequently made mistakes. Many use the words but not the correct techniques. Learn how to do it correctly.

Cost - \$1,195

Email [learn@hobbsegr.com](mailto:learn@hobbsegr.com) to register.

## SEMINAR TOPICS

- The seminar focuses on the value of HALT and HASS throughout the design and manufacturing processes.
- Participants will obtain a better understanding of what the HALT and HASS methods do for process and product maturity in an organization and will enable better integration of the methods of HALT and HASS into the design and manufacturing processes respectively.
- The author shares his own experiences with rapid product maturity through deployment of disciplines such as Design for Six Sigma, Lean Engineering, Design for Manufacturability and Reliability engineering and how HALT and HASS can be used to enhance these design disciplines.
- If your company is using a phase review program management process during development and has adopted an ISO quality management system, the seminar will explore how the HALT and HASS techniques significantly enhance these programs. These discussions are interwoven throughout the seminar.

## SEMINAR TOPICS

- HALT and HASS are presented as part of a holistic program of reliability validation. The instructor sets a foundation of what HALT does and how it works by reviewing key concepts of the big picture of environmental testing.
- Mil-Spec 810.G is reviewed in the context of what the military expects a supplier to do in order to assure product reliability.
- Conventional methods of environmental testing are long and laborious; they require many sample devices to make it through the test process. Learn why the samples and time are dramatically reduced by using HALT during the design process. Learn why reliability growth testing (RGT) can be eliminated by using more effective HASS methods during manufacturing.
- In addition, this seminar goes into real-world failure mechanisms and how environmental dynamics such as temperature and vibration inter-act with parts and materials in the design. This includes effects on electronic components and circuits as well as electro-mechanical devices and optical alignments.
- The leaders in the application of the methods learned from these seminars, which have been presented since 1980 in an ever evolving and improving form. The seminar follows the text *HALT & HASS, Accelerated Reliability Engineering* by Gregg K. Hobbs, the inventor of the methods. This is the original and most complete book on the subject.

## BENEFITS

Participants have reported enormous benefits including:

- Reduction of product development time.
- Reduction of test time
- Return on investment of 50:1 in the first year!
- Hundreds of millions of dollars saved in 2 ½ years!
- Dramatically increased MTBF's, 838 times improvement in one case!
- Greatly reduced warranty and field retrofitting costs!
- One company reported a savings of \$30 million in one year!
- Reduction in REL-DEMO costs by orders of magnitude!
- Substantial savings in manufacturing costs! Almost no scrap and rework!
- Vast reduction in screening and test equipment costs!
- Detect those "No Defects Found" in field returns! The "Magic Bullet"!
- The instructor will go through his own deployment, design flaws detected, cost reductions, latent defect detection in HASS, cost reduction opportunities "NDF" reduction and more.

## INSTRUCTOR

Aldo Fucinari has 35 years' experience in design validation testing, electrical engineering and environmental testing and holds a BSEE degree in Computer Engineering. He has worked in various fields of engineering including computer peripheral storage engineering, automotive engineering and systems engineering. Aldo was most recently manager of systems engineering with Kulicke & Soffa Industries where he was involved with ultrasonic wedge bonding equipment and HALT reliability testing.

At Seagate Aldo was part of the initial deployment of Seagate's Design for Six Sigma program where he received certification as a Master Black Belt in DFSS and a Black Belt in Six Sigma process and transactional process.

At Emulex Aldo was global quality manager with responsibility for supplier quality performance of 4 source assembly factories supplying product direct to stock to major computer companies worldwide. Aldo has long-term experience with suppliers that are equipped to do full HASS and HASA testing. Now as an independent consultant he is involved with world-class companies in bio-medical, defense and automotive products. He is also a leading adopter of lean product development methods and design for manufacturability.

Aldo is a senior member of ASQ and a member of the Lean Product and Process Development Exchange.

## Contact

**Hobbs Engineering**  
**for more information**  
**and to register.**

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