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Current: Entela, Inc. – Senior Program Manager

Ted Fine, Senior Program Manager, Intertek ETL SEMKO, has focused his career on the uses of laboratory testing in developing reliable products. At Intertek ETL SEMKO, Ted is concentrating on finding opportunities to use their accelerated stress testing expertise in product development projects, including technical presentations of Intertek's specialty – Failure Mode Verification Testing, an advanced technique within the Accelerated Stress Testing field. Ted is also responsible for originating, leading and achieving all technical sales efforts in the Midwest region. Intertek is a multi-national engineering, testing and quality systems services firm specializing in automotive, furniture, medical industry and product safety testing plus quality systems registration.

Previous Positions: Previous positions included Director of Chemical and Materials Research at Rexnord Corporation, Manager of Advanced Technology at ARCO Metals, Manager of Planning- Materials at IH, and various steel product development positions at Inland Steel.

Education: B.S. and M.S. in Metallurgical Engineering from University of Minnesota; P.E. License – Wisconsin; Various management and financial courses.

(Presentation Summary)

BRINGING HIGHLY RELIABLE PRODUCTS TO MARKET FASTER

Succeeding in today's marketplace demands that companies deliver reliable products for a fair price, and that the products reach the potential consumer in a timely manner. Unfortunately, traditional testing methods require time consuming product trials, and often these methods do not provide the information that is essential to convert a bug-ridden prototype to a consumer-ready reliable item. Fortunately, there is a new class of testing methods, Accelerated Stress Testing (AST), that can provide the answers needed to increase product reliability and to do so in a fraction of the time and cost of traditional testing.

This talk will present a background on why product developers test, the shortcomings of traditional methods, and why the new alternatives are a better route. The basis premises are that: 1) Design engineers are intelligent, and if a flaw were obvious, they would have eliminated it during the prototype stage; 2) Almost all products have hidden flaws that require exaggerated stress conditions to expose; 3) Real consumers will always apply exaggerated stress conditions; and 4) We only learn through failure and then by correcting the failures. One particular AST method, **Failure Mode Verification Testing - FMVT®**, provides a fast durability test (1-5 days) that stimulates the emergence of latent failure modes that exist in the product and allows for the analysis of the unique failure modes, their progression in time and stress, their repeatability and ultimately their potential impact on the reliability of the product. **Failure Mode Verification Testing (FMVT®)** is a patented Intertek ETL SEMKO process which employs highly accelerated test methods in a manner intended to reveal inherent design weaknesses. The process utilizes known sources of "stress" which are amplified to magnitudes that are limited by "reasonable" failure modes.

AST techniques include complex vibration tests, HALT, MEOST, FSLT and FMVT. AST techniques have been used to eliminate "infant mortality" issues, isolate warranty situations, minimize warranty claims, compare alternative component choices, determine RoHS effects, and to improve ROI. Real life examples will be provided to illustrate the many uses of Accelerated Stress Testing.