Special Lecture

The New FMEA, an Econometric Approach

John J. Flaig, Ph.D., FASQ
Distinguished Alumnus, College of Science

Abstract:
The acronym FMEA stands for Failure Mode and Effects Analysis. FMEA is an inductive reasoning (forward logic) single point of failure analysis and is a core task in reliability engineering, safety engineering and quality engineering. FMEA is a systematic technique using engineering knowledge, reliability, and cross-functional team activities to improve the product, process, or service. This technique ensures that all conceivable failures and their effect on operational success have been considered in a forum for recommending and tracking risk-reducing actions.

FMEA is a tool for quality and reliability improvement through rational project prioritization of failure rate reducing actions. The procedure for conducting FMEA was released in 1949 by the US Armed Forces Military Procedures in document MIL-P-1629; revised in 1980 as MIL-STD-1629A. The speaker will describe and analyze the classical Risk Priority Number (RPN) approach. Some of the problems with the RPN model will be discussed and an alternative model based on economic risk will be introduced. The Economic Priority Number (EPN) model is designed to mitigate the issues of the RPN approach. In addition management will be better able to appreciate the value of FMEA because the results are presented in a language they understand i.e., the language of finance.

Bio: Dr. Flaig is a Fellow of the American Society for Quality (ASQ), an industry veteran of Silicon Valley, and the managing director of Applied Technology, Inc. He generously contributes a scholarship for Mathematics and Statistics students and was recognized as the 2012 Distinguished Alumnus of the College of Science.

Thursday, November 19, 2:05 - 2:55pm in 3-1637