

Amigo Quality

Volume 40 Number 2

Welcome to the November 2019 issue of the Newsletter, your local provider of information and learning opportunities related to quality professionals.

Notice: The section is actively looking for volunteers willing to serve on the leadership committee. If you are willing to volunteer, please send an email letting us know your willingness to serve to Officers@asq1401.org with a subject of "Willing to serve on the leadership committee."

General Membership Meeting

DATE: Wednesday, November 20, 2019

SCHEDULED TIME: 6:30 PM to 8:00 PM

LOCATION: Hilton Garden Inn

111 W. University Ave.

SPEAKER: Mr. Keith Fong

TOPIC: The Harmonized AIAG-VDA Failure Mode

and Effects Analysis: What's changed?

THE CHAIR SPEAKS EVARISTO CAMPOS-TORRES

Hello, Fellow Quality Professionals!

I hope everyone is doing well.

Last month we had a great experience at Freeport-McMoRan Rod and Refinery. Mr. Juan Sanchez and his team opened the doors of their facility to our chapter. After a very good presentation where Mr. Sanchez talked about their processes, we had a tour of their

plant. All participants had the opportunity to learn how a company in this industry runs.

This month we will be honored to have Mr. Keith Fong, an expert in continuous improvement and problem solving with many years of experience working with Delphi Technologies supporting teams in the engineering, manufacturing, and support areas. He will talk about the changes to the FMEA tool released earlier this year. The Automotive Industry Action Group (AIAG) for North America and the Verband der Automobilindustrie (VDA) for Europe offered distinct versions of the Failure Mode and Effects Analysis (FMEA). Given the global footprint of the automotive manufacturing base, there was a demand for communizing the FMEA tool. After several years of development involving OEMs and Tier 1 suppliers, the harmonized AIAG-VDA FMEA Handbook was released earlier this year. His presentation will review some of the key changes and how to implement them. This version of the FMEA is for the automotive industry, but some of the process improvements will benefit quality practitioners in other industries, too. I'm sure we will learn and enjoy Mr. Fong's presentation.

I hope to see you there!

Best regards,

Evaristo Campos-Torres

Chair, ASQ Greater El Paso Section 1401

AUTOMOTIVE SECTION

HECTOR LUGO

Thank you to all participants on this exciting field, and the winner is: A recent study reveals significant growth in automotive power electronics driven by factors such as the rise of the EV and company expansion into burgeoning regions. It concludes that the global automotive power electronics market will grow at a 19.0% between 2018 and 2026, and the market is expected to reach a valuation of US\$23.350 billion by the end of 2026.

Power electronics is a broad term given to a collection of solid-state devices such as diodes, silicon-controlled rectifiers (SCRs), thyristors, gate

turn-off thyristors, power MOSFETs, and many others used for control and conversion of electric power. They play a major role in controlling automotive electronics. Automotive electronics is an advanced term derived from power electronic devices and its uses in modern electric power steering, braking systems, seat control, HEV main inverters, central body control, and so on.

Continental AG, Mitsubishi Electric Corp., Texas Instruments Inc., Robert Bosch GmbH, Toshiba Corp (Japan), ON Semiconductor Corp., Infineon Technologies AG, Maxim Products Inc., NXP Semiconductors N.V., Qualcomm Inc., Robert Bosch GmbH, Renesas Electronics Corp., and Vishay Intertechnology Inc. are the key players in the automotive power electronics market. These companies have been adopting several strategies, such as expansion in developing regions, to tap the underlying opportunities in these markets.

See you at the meeting!

EDUCATION SECTION

KIM PRIES

In the Taiji classics, it says, "find the straight in the curved." However, I would suggest we spend less time on the linear and more time on the nonlinear, which often seems to be a better representation of reality. Many things we know are intrinsically nonlinear.

- Automatic transmissions
- Accelerator pedal to the engine
- Brakes
- Air and land engine power
- Compressible fluids

The late George Box said something like, "All models are wrong; some are useful." Many models are based on linear approaches, and some, like the generalized linear model (GLM), bear this concept in their name. It is not so much that the linear approach is inept or evil, but more because reality is forever full of surprises and paradoxes.

Linear thinking leads to silly approaches like grand strategy and simple-minded tools, when "muddling through" (the late Charles Lindblom) and chaos theory are most likely significantly more

relevant. Chuckle at articles with titles like "Seven Things you can do to Save Your Marriage;" my experience suggests 10,000 things might be a more accurate number!

Check it out!

MANAGEMENT SYSTEMS

ALFONSO ENRIQUEZ

VDA is the German Association for the automotive industry. Germans invented the automobile¹, the truck, the bus. AIAG is the automotive Association in the USA. Americans invented the modern assembly line, the first version of the FMEA came from US military² in 1949, in 1963, NASA used it in the Apollo project, and according to one of the speakers at our conference meeting it is still in use by NASA, in 1977 the use of FMEA was mandated by Ford Motor Company, in 1980 VDA developed FMEA for the industries in Germany. In 1993 the AIAG Manual was released; in the year 2015, the need was recognized to harmonize the AIAG and the VDA manuals.

The new FMEA has a seven-step approach: Preparation and Project Planning, structure analysis, function analysis, failure analysis, risk analysis, optimization, and documentation of results.

There is a table for Severity, but now a severity of 9 is strictly regulation⁴, the Priority Risk Number disappears, it is replaced with Action Priority, there are some tables for that: one for a detection level from 7 to 10, the table has Severity numbers on the rows and Occurrence numbers on the columns.

Detection	7 to	10								
S/O	1	. 2	2 3	4	5	6	7	8	9	10
1	L	L	L	L	L	L	L	L	L	L
2	М	М	М	Н	Н	Ι	Ι	Ι	I	Ι
3	М	М	М	Н	Н	Н	Н	Н	Н	Н
4	М	М	М	Н	Н	Н	Η	Н	Ι	I
5	М	М	М	Н	Н	Н	Η	Н	Ι	Ι
6	М	М	М	Н	Н	Н	Н	Н	Н	Н
7	М	М	М	Н	Н	Н	Ι	Н	Ι	I
8	М	М	М	Н	Н	Η	Η	Η	Ι	Η
9	Н	Н	Н	Н	Н	Н	Н	Н	Ξ	Н
10	Н	Н	Н	Н	Н	Н	Η	Н	Ι	Ι

H stands for high priority, M for medium priority, and L for low priority. There is a relation between columns and for the process FMEA⁵. Training is already being offered to learn the new tool.

¹https://www.vda.de/en.html

²Annurag Trivastava, AIAG VDA FMEA New Handbook, July 21, 2019, https://www.youtube.com/watch?v=UUqOeCdvACo

³VDA, White Paper on "The New Standard to analyze risk within the automotive industry," 2019

⁴OMNEX, New AIAG VDA FMEA, June 15, 2018, https://www.youtube.com/watch?v=4 F1oWZi1DQ,

⁵https://www.qualitydigest.com/inside/management-article/inntroducing-aiag-vda-dfmea-062419.html

RE-CERTIFYING AND ASQ CERTIFICATIONS

STEVEN SCHAFER

Out of a total of 9 member(s) whose certifications expired June 2019, 2 lost their certifications since not re-certify by the end of December 2019, 0 member(s) re-certifications are being processed, and seven member(s) completed their re-certification.

Out of a total of 5 member(s) whose certifications will expire December 2019, 4 will lose their certifications if they do not re-certify by the end of June 2020, 0 member(s) re-certifications are being processed, and one member(s) completed their re-certification.

Out of a total of 9 member(s) whose certifications expired June 2020, 8 will lose their certifications if they do not re-certify by the end of December 2020, 0 member(s) re-certifications are being processed, and one member(s) completed their re-certification.

Members can re-certify early! As long as you have enough points, you can re-certify as early as six months before your certification expires. Your Certifications will be extended three years beyond the certification expiration date you currently have for your certification, so you don't lose anything by re-certifying early. Remember, you can only claim points that you have accumulated up to the time you submit, and these points need to be collected during your three year certification period. Out of a total of 6 member(s) whose certifications will expire December 2020, 6 will lose their certifications if they do not re-certify by the end of June 2021, 0 member(s)

re-certifications are being processed, and 0 member(s) completed their recertification.

If anyone has questions on how to re-certify to extend their ASQ Certifications or how to synchronize them if they have more than one, please let me know. Re-certifying by exam costs more and is a lot more difficult than re-certifying through the accumulation of RU points. You can reach me, the Re-Certification Chair, at 915-241-4780 or (501) 615-8170. Please leave a message on the answering machine if no one answers, and I will call back you as soon as I can. You can also reach me via the Internet at spikeguate@sbcglobal.net. I am ready to help with any questions you might have about Re-Certifying or about any ASQ Certifications you might have, call me. The Re-Certification Journal is at the following link and will guide you in the re-certification process https://asq.org/cert/recertification When re-certifying, always get the most recent Re-certification Journal information. The lasted Re-Certification Journal is November 2018. For ASQ members, the fee for one certification is \$69.00 and for two or more \$89.00; for non-members, the fee for one is \$109.00, and two or more are \$109.00 each).

Projected Events											
YEAR	Month	Month Date Day		Event	Location						
2019	November	20	Wednesday	General	Hilton Garden Inn University						
				Membership	111 W. University Ave.						
				Meeting							
2019	December	11	Wednesday	Christmas	Carlos and Mickey's						
				Dinner	12111 Montwood. Dr. 79936						
2020	January	15	Wednesday	Leadership	Good Coffee restaurant 6101						
				Committee	Montana Ave 79925						

2019 Officers/Committee Chairs

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