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RSI APPOINTS PATTY LONG AS PRESIDENT

Submitted by Lee Verhey – RSI

On November 18, RSI announced the appointment of Patty Long as its president. Most recently serving the Plastics Industry Association (PLASTICS) as interim CEO and Chief Operating Officer, Long is a skilled leader with more than 25 years of executive experience in trade associations. “I look forward to working with the members of RSI to grow our industry and continue to sustainably drive America forward,” said Long. [Read the full announcement.](#)

TANK CAR INDUSTRY VISUAL INSPECTION UPDATE

Submitted by Gary Alderson and Alfredo Ricardo – AllTranstek, LLC

During the October 2021 Tank Car meetings in Dallas, Texas, the following information was provided from Mr. Matt Forister, Mr. Bruce Siebold, and Mr. Ken Dorsey, concerning the implementation

of CPC-1376. The information was based on questions from the ASNT Level III’s in attendance concerning C-III, Appendix T, and the Visual Inspection (VT) requirements as implemented by CPC-1376 on March 19, 2021 with compliance required by September 19, 2021.

Mr. Forister stated that until there is clarity regarding Visual Inspection (VT) in other sections of M-1002, the Tank Car Committee is **delaying implementation** of visual inspection other than weld inspection. Mr. Forister asked that any audit issues concerning findings by the BOE auditor be brought to the attention of Mr. Forister, and Mr. Jeremy Killian, BOE General Manager. The Tank Car Committee will provide guidance to the BOE auditors concerning visual testing.

Mr. Forister also asked that applications for tank car facility certification include very specific information in the Scope of Work concerning Visual Inspection and that all facilities must ensure they comply with the owner’s requirements for visual testing. Tank car facility owners that were in attendance at the October meetings also expressed concern that initial facility applications filed with the AAR are not being processed because they did not include verification of VT certified personnel for VT inspection other than weld inspection.

Questions from the industry concerning compliance with Visual Inspection (VT) should be directed to Mr. Matt Forister and Mr. Bruce Siebold.



Q: What is a PPAP?

A: PPAP stands for Product Part Approval Process. The PPAP process is used extensively in the automotive industry to provide a standardized process for approving a new part and/or new supplier. It involves the submission of sample parts (and corresponding test data) and documentation (including process flow diagrams, PFMEA's, control plans, and measurement system analysis).

Q: What is an FMEA?

A: FMEA stands for Failure Mode and Effects Analysis. It is a tool used to identify risks in a product or process, including both quality and safety risks. It provides a standardized scoring system to identify the highest risks so that action can be taken to reduce risk.

There are different types of FMEA's, including design FMEA (DMFEA) and process FMEA (PFMEA). DFMEA is used in designing new products and focuses on potential product failures (includes product malfunction, shortened product life, or safety hazards). PFMEA is used to analyze a manufacturing process to identify potential process failures (includes product quality, process reliability, safety hazards, or environmental issues). Regardless of the type of FMEA, there are 6 basic principles in the creation of an FMEA.

Basic Principles:

1. Define what can go wrong (potential failure modes)
2. Rate the severity (S) of each failure mode
3. Rate the occurrence (O) or probability of each failure mode
4. Rate the ability to detect (D) each failure mode
5. Calculate the risk priority number (RPN) for each failure mode ($RPN = S \cdot O \cdot D$)
6. Develop action plans to address the high RPN's (highest risk)

Q: What is AREMA?

A: AREMA is the American Railway Engineering and Maintenance-of-Way Association. Per the AREMA website, it is a professional association for railway engineering personnel that offers numerous educational opportunities and produces and publishes the recommended practices for railway engineering infrastructure including track, structures and communications & signals.

PART QUALIFICATION IN THE RAILROAD INDUSTRY: A UNION PACIFIC PERSPECTIVE – PART 1

Submitted by Benedict Okine – Union Pacific Railroad

Introduction

President Abraham Lincoln established Union Pacific Railroad in 1862, setting the wheels in motion to connect the nation. For nearly 160 years, the railroad has been a leader in innovation, delivering the goods Americans use every day. The same can be said for the rail industry as a whole, which leverages technology to provide environmentally responsible service to its customers. However, there are areas, such as supplier quality management, that present an opportunity for the industry to grow and enhance its processes in line with those already being leveraged by the auto industry.

Part approval presents a peculiar challenge for Class I railroads. While there are controls in place for track components, because Class I's generally own the designs or use AREMA-approved parts, the process for approving locomotive maintenance parts is not nearly as defined and associated practices are varied. At this time, there is not a defined industry compliance standard for supplier part approval, and in many cases only the slightest attention is paid to this critical area.

Due to a lack of a standardized supplier certification and inconsistent management practices, the potential for inferior quality requires significant attention. The need is evident by the number of AAR 7.1 corrective actions filed.

Union Pacific's Approach

At Union Pacific, we developed part approval procedures and have been fine-tuning them to address unique situations. These approval procedures are not exclusive to Union Pacific, but are quite unique to Class I railroads. Locomotive OEMs and track component suppliers may have their own supplier part approval processes; however, the general industry trend is a "one-piece verification" or a cursory checklist completed by a prospective supplier. From Union Pacific's perspective, this is inadequate and does not ensure prospective suppliers can consistently manufacture high-quality parts. Our approach borrows from the well-developed and proven practices of the automotive industry, commonly known as the Production Part Approval Process (PPAP).

This approach has resulted in a considerable reduction of inferior-quality components entering our system, minimizing down time and disruptions, while improving safety. We implemented a tiered approach to our part approval process that improves our cycle time, while ensuring part quality is not compromised. A short-form approval process allows Union Pacific to confirm that a potential supplier can provide the part per our specifications. The more detailed PPAP that follows allows us to look into many elements of the supplier's quality management system, further ensuring the part can be consistently produced with the required quality.

Railroad vs. Automotive

PPAP, developed by the Automotive Industry Action Group (AIAG), is a standard process for product approvals in the automotive industry. This process is generally triggered by certain significant events in the supply chain, such as new parts or suppliers, design changes and manufacturing location changes. The PPAP requires a supplier to submit evidence they have completed several elements within their quality management system.



Have an Idea for an Article?

Please submit your drafts to Donna Jacobi at djacobi@amstedrail.com or Gary Alderson at alderson@alltranstek.com.

Interested in Joining RSI QAC?

Contact Lee Verhey at verhey@rsiweb.org.



Not Getting the Newsletter and Want to Subscribe?

Contact Lee Verhey at verhey@rsiweb.org.

Until the adoption of Union Pacific's current, formalized approval process, we did not require a review of purchased parts and components from a holistic manufacturing and quality system perspective. For example, Union Pacific did not require the supplier to re-qualify parts upon changed manufacturing locations, sub-suppliers or even aspects of the product design. By implementing a formal process, we bridged the gaps that could potentially pose challenges to the quality of our supply chain, especially for locomotive maintenance. This in no way implies that every issue is eliminated; however, it assures that most problems are anticipated and managed to minimize their impact. After all, without quality issues a quality department is redundant!

Admittedly, some elements of the automotive industry's PPAP process do not lend themselves for easy adaptation by the rail industry. This is especially true in cases of reconditioned, custom-made and low-volume parts. In such scenarios, Union Pacific adapts or modifies those PPAP elements, while focusing on the most important elements. We also have found issues tracing the source and quality of the components used in reconditioning major assemblies. How do you track where a supplier gets a gasket, or O-ring used to recondition a turbocharger or an auxiliary generator? How do you guarantee that it will have similar reliability as the OEM equipment part? While the railroad may specify a particular source for repair parts, there are many components whose source cannot be specified and require us to go beyond a basic, cursory checklist.

Reconditioned parts pose a peculiar challenge, especially for complex assemblies found within turbochargers or generators. How do we ensure that the supplier is reconditioning to OEM specs and using high-quality material in the reconditioning process? This challenge is compounded when Class I's do not have their own specifications and have to rely on OEM specifications for such complex assemblies. Additionally, some of these OEM specifications may be proprietary and not readily available.

Stay tuned for the next issue of the newsletter for part 2 of this article.

USEFUL LINKS

[Railway Supply Institute](#)

[RSI QAC & Previous Newsletters](#)

[RSI Tank Car Resource Center](#)

[Registry of M-1003 Certified Companies](#)

[M-1003 Frequently Asked Questions](#)

[American Society for Quality - Training](#)

[RSI 100](#)

[AAR M-1003 Certification on-line Application](#)

[AAR M1003, Section J Specification for Quality Assurance](#)

[AAR Training Schedule](#)

[AAR Circulars](#)

[MSRP Publication Current Revision Status](#)

[AAR Online Material Nonconformance Reporting System \(Chapter 7\)](#)

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