

# Dealing with Low E Requirements



In this monthly column, Strategic Account Manager – Stationary Equipment for A.W. Chesterton, Rodney Roth will focus on the essentials of Low-E compliance and modern valve sealing technologies.

The need to manage Low E requirements as defined by the United States Environmental Protection Agency (EPA) is an issue more and more Refinery sites, Petrochemical sites and Chemical sites are being forced to deal with as the US EPA continues to negotiate and implement Consent Decrees.

In seeking ways to address and deal with the requirements of Consent Decrees, there are things end users can do to be prepared for dealing with any requirement they may be faced with as part of an impending Consent Decree.

As a first step, end users should review their current valve inventory to determine the suitability of the products that are currently in stock to comply as outlined by EPA Low E definitions. In addition to the valves in stock, end users should continually review and update their AML (Approved Manufacturers List) confirming the approved valve OEM's are capable of supplying valves with the required documentation to meet Low E definitions. This can be done by making sure the AML has the necessary language (API 624, API 641 and API 622 with less than 100 ppm without re-torques) to insure everything being purchased meets to requirements as defined. API 624 (published in 2014) is required as part of API 600 and API 602 (as of 2015) and is sure to be added to API 623 and API 603 as the standards are updated over the next 12 months. Additionally, API 641 (Low E type testing of Quarter Turn valves) was published in October of 2016 and is being considered as being requirements added to API 599, API 608 and API 609 as the standards are updated.

Once the AML work has been completed and the documentation has been received from the valve OEM's as required, it is imperative that the necessary guidelines are put in place to properly manage the warranties in order to maintain the Low E status of all valves installed. This includes performing the required maintenance and inspections to meet the warranty caveats, such as required torque verifications, requirements at the point of installation of the valve, as well as meeting the requirements after the valve has actually been placed in service and process pressure has been initiated.

Another thing to consider when completing your AML work with regard to valves is to also vet the OEM packing being used exclusive of the valve to make sure it is a product you would allow to be placed into the packing section of your AML. This should include the warranty/guarantee for the packing as a standalone product.

Another important factor to be sure of when completing the work required for Low E compliance that a five year warranty/guarantee is required and something you should have included in the documentation you requires from valve OEM's pursuant to Low E definitions affecting many end users.

It is also a potentially very good idea to manage your used valve pool for the purpose of re-installing valves that have been repaired into the facility and have them meet the requirements of Low E. Valve repair facilities have the capability to repair and repack every valve suitable for repair to be capable to Low E compliance. I would also point out that this is something that all end users should consider doing as a standard, because Low E packing materials will work in stem, but steam packing will not work in Low E.

The biggest point is this, if you are not requiring valve repairs to be done to Low E as a standard, it is something you should immediately discuss with the valve repair company you are using for your daily repair work.

A very good rule of thumb to follow with regard to valve repair would be to implement API RP 621 (Reconditioning of Metallic Gate, Globe, and Check Valves) as a standard for your valve repairs. In addition to the basics of API RP 621, the use of Trained/Certified Installers (required as part of packing warranties), using hardened washers in lieu of replacing damaged gland flanges, using proper and effective anti-seize to insure the ability to re-torque valves ef-



fectively in the future and making sure torque wrenches are used for all installation during repair and subsequent re-torques or torque verifications required in the future.

It is important to understand that each packing manufacture has their own specific training that is required to certify the installers. Because of this, if you will approve and potentially use a high number of Low E packing suppliers, you must insure your staff and the staff of the valve repair companies you are using are trained by all of the potential packing suppliers you have approved.

In closing, all of the things that have been outlined as part of this column come down to having the ability to ef-

fectively perform asset management with regard to your valve population, albeit new or used/repaired. The ability to manage the assets should include software to calculate torque values, identify the proper packing to use, manage any Engineered Solutions that may be required and manage the database of those who have been properly trained for use of the valve packing products being used.

Having said that, much of this may seem overwhelming when looking at everything together, but if you break these things all down individually and prioritize the order of completion, it will begin to seem much simpler than you may have initially thought.

## ABOUT THE AUTHOR

Rodney is responsible for A.W. Chesterton's (AWC) Global OEM Valve program, AWC's Knowledge Provider Program for Stationary Equipment/Consultative Technical Services and AWC's Strategic Accounts Initiative.

Rodney has over 25 years of experience in the manufacturing, design, R&D, engineering, sales and marketing of stationary sealing solutions to include packing and gaskets. Rodney has extensive experience in the recommendation and design of engineered sealing solutions for use in all types of valve and flange applications with a focus on Low E sealing Technology for valves and large diameter critical flange sealing.

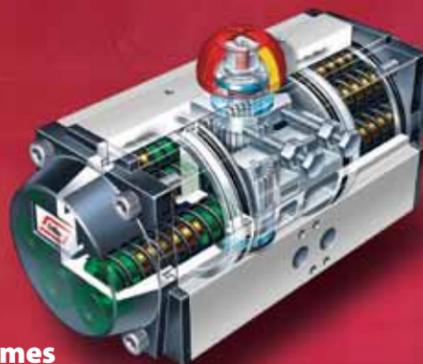


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