

A Better Way to Plug Fin Fan Exchangers

Torq N' Seal® Heat Exchanger Tube Plugs

Abstract

Fin Fan Exchangers are now commonplace in refineries and power generation facilities due to favorable O&M costs, water limitations, and groundwater concerns. The tube plugging of these units is thus a critical piece of any refinery or power plant turnaround. **Torq N' Seal®** Heat Exchanger Tube Plugs provide a **fast, simple, and effective** solution to this growing need.

Background

Air Cooled Heat Exchangers, commonly referred to as Fin Fan Exchangers, are a low-cost way to cool process fluids. These types of exchangers utilize a large fan to force air over a bundle of finned tubes with heated process fluid running through them. The use of forced ambient air reduces the demand for pumps, piping, water, and containment structures, resulting in lower operating and maintenance costs. Add to that the limited availability of water in some locations, plus increasing groundwater concerns, and Fin Fan Exchangers are becoming ever more prevalent in the power generation and refining industries.

The Need

As with any heat exchanger, Fin Fan Exchangers experience periodic tube leaks that reduce efficiency, increase unit degradation, and result in unplanned downtime if left unchecked. In addition, Fin Fan Exchangers have unique design considerations that can make traditional tube plugging methods difficult.

First, access to the tubesheet of these units is often restricted by the presence of a water box or plugsheet. This makes identifying leaks more difficult which increases the need to get things right the first time. Once a leak is identified, it can be difficult to position a traditional tapered tube plug, much less swing a hammer in the confined space of a water box. The tapered plug method also risks damaging the tubesheet and causing leaks in adjacent tubes, amplifying the original problem rather than solving it.

Second, these units often have very thin tubesheets which can increase the likelihood of causing damage when using traditional tapered plugs. As a result, many users will attempt to use hydraulically installed mechanical plugs but locating these within the tubesheet profile can prove difficult. Installing hydraulic plugs past the tubesheet can result in 'ballooning' of the tube and an ineffective seal that is difficult or impossible to repair.

The Solution

Torq N' Seal® Heat Exchanger Tube Plugs are a **fast, simple, and effective** solution for tube plugging any heat exchanger. These mechanical tube plugs are installed with a standard torque wrench and require no special training or tooling, easily sealing tubes up to 7,000 psi in under 1 minute per plug.

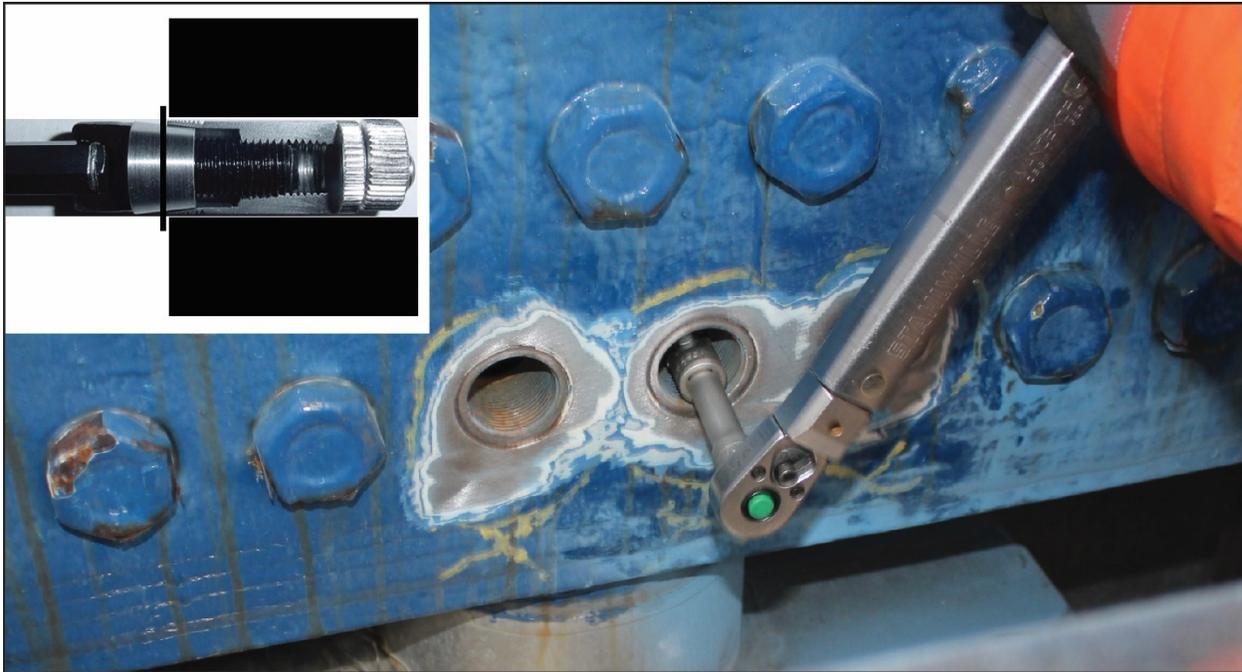


85 Industrial Avenue, Little Ferry, New Jersey U.S.A. 07643
Phone: (201) 641-2130 /// Fax: (201) 641-2309 /// Email: SALES@JNTTECHNICAL.COM

Additionally, with two simple modifications **Torq N' Seal**® becomes the perfect solution for plugging Fin Fan Exchangers:

The **Torq N' Seal**® Drive Extension provides a simple way to insert the plug past the water box or plugsheet. This Extension comes in a variety of sizes to match the depth of the tubesheet and gives the user an extended reach without otherwise changing the installation procedure or efficacy of the plugs. With **Torq N' Seal**® there is zero risk to the tubesheet or adjacent tubes, meaning the job will be done once and done right.

The second modification is the patented **Torq N' Seal**® Tubesheet Ring. This ring stops the plug at the face of the tubesheet, providing a consistent install location that is always within the tubesheet profile. The **Torq N' Seal**® Tubesheet Ring eliminates the risk of installing a plug past the tubesheet and tying yourself up with hours of remedial work. Please review the below for how it works.



Torq N' Seal® Plugs being installed in a Fin Fan Exchanger

Conclusion

Torq N' Seal® Heat Exchanger Tube Plugs are the solution of choice for heat exchanger plugging projects globally, and now the same methods can be applied to Fin Fan Exchangers to save time, money, and headaches on your next turnaround or outage. **Fast, Simple, Effective. Torq N' Seal**®.

For more information, please visit WWW.TORQ-N-SEAL.COM, email SALES@TORQ-N-SEAL.COM, or call 1 (201) 641-2130.



85 Industrial Avenue, Little Ferry, New Jersey U.S.A. 07643
Phone: (201) 641-2130 /// Fax: (201) 641-2309 /// Email: SALES@JNTTECHNICAL.COM