PERRY EQUIPMENT CORPORATION

ISO 9001

SOLUTIONS FOR

ULTRA LOW NOx BURNERS

ENGINEERED FILTRATION SOLUTIONS

USA Patent No. 5827430 and 5893856 (International Patents Granted)
Problems with Ultra-Low NOx burners?

PECO HAS THE ULTIMATE SOLUTION

Perry Equipment Corporation (PECO®) offers the solution for addressing chronic problems with fouling in Ultra-Low NOx burner applications, while minimizing capital and operating expenses. The PEACH Gemini PuraSep® utilizes patented dual coalescing technology to cope with large contaminant loads. This characteristic provides consistent performance over the lifetime of the coalescing element. In addition, choosing a Gemini for your fuel gas coalescer reduces the complexity of the fuel gas system by eliminating the need for ladders, platforms, strainers, filter separators and associated control equipment.

Ultra-Low NOx burners require contaminant-free fuel gas. Particulate and liquid droplets less than tenths of a micron can result in burner tip plugging, flame out and thermal instability. The effects are elevated NOx emissions, excessive operating costs and serious safety concerns. To address this growing concern respected refinery sources recommend the installation of high efficiency filtration systems.

API RP 535 states, Coalescers or fuel filters are required on all Ultra-Low NOx and latest generation burner installations. (1)

Specifically, fuel filters / coalescers capable of achieving solid and liquid contaminant removal down to 0.3 micron are recommended.

Why does refinery gas require this level of filtration?

• Array of challenging contaminants and process conditions.
• Emissions reduction.
• Investment protection by maintaining warranty requirements for burners.

Refinery engineers find themselves challenged to specify a filtration system that can achieve 0.3 micron on a reasonable budget. Contrary to the characteristics of refinery gas, most coalescers operate best under very stable conditions. With this in mind, surge tanks and prefilters are often installed upstream. In effect, this preconditions the fuel gas and improves coalescer performance and filter element life. An alternative approach is the installation of an automatic self-cleaning coalescing filter, which can be expensive and cumbersome to accommodate. Both of these methods tend to involve multiple vessels and auxiliary systems, driving up costs and presenting unnecessary maintenance concerns.

Elements can be changed in 1/4 the time it takes to change the elements in a vertical unit.
Designed to perform in challenging services, this Gemini was operating at peak performance in an extremely dirty service that was catastrophic for a vertical coalescer. Its ability to handle large contaminant loads makes the PEACH Gemini PuraSep perfect for refinery applications.

Contaminant Loading Characteristics
Gemini eliminates the need for a filter separator typically required to protect a vertical coalescer.

PECO’s PEACH Gemini PuraSep® answers the call of refinery Engineers. The patented dual coalescing concept provides the Gemini with extraordinary tolerance for high contaminant loads and fluctuating process conditions, in most cases eliminating the need for an upstream filter separator or scrubber. The first stage of the Dual Coalescing system filters, conditions and buffers, providing the second stage with optimum conditions for high efficiency coalescing and extended performance lifetime. This unique concept is accomplished with PECO’s PEACH® coalescing technology ensuring reliable consistent performance in refinery fuel gas applications.

The Gemini is equipped for online performance verification via Direct Contaminant Measurement (DCM) laser particle analysis by Scientific Process Solutions (SPS).

The first stage of the PGC element provides a buffer from the rough conditions in refinery applications. It conditions and pre-coalesces, providing the second stage with optimal conditions for coalescing.

For more information on the Gemini:
www.perryequipment.com
select Products
select Vessels
select PEACH Gemini PuraSep®
In less challenging burner applications such as processed refinery gas or pipeline natural gas PECO® incorporates Next Generation PEACH® Coalescing Technology into its vertical reverse flow coalescing filter.

PECO’s 77V is specifically designed to meet the stringent standards for Low NOx burner fuel gas. As with all PECO® products, care was taken in development to deliver a product that performs under typical application conditions and then some. PECO’s 77V features:

- Full diameter closure
- Inlet flow baffling system
- Advance Peach® coalescing elements
- Outlet baffle
- Reliable element sealing arrangement

Online performance verification is available at www.sps2test.com

For more information on the 77V: www.perryequipment.com
select Products
select Vessels
select Series 77 Coalescer

Meets API requirements for fuel gas cleanliness.