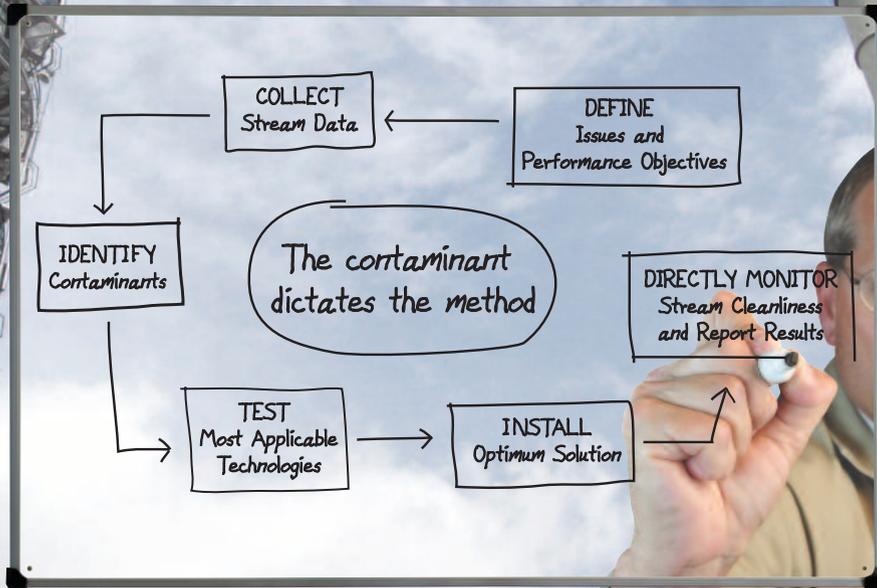
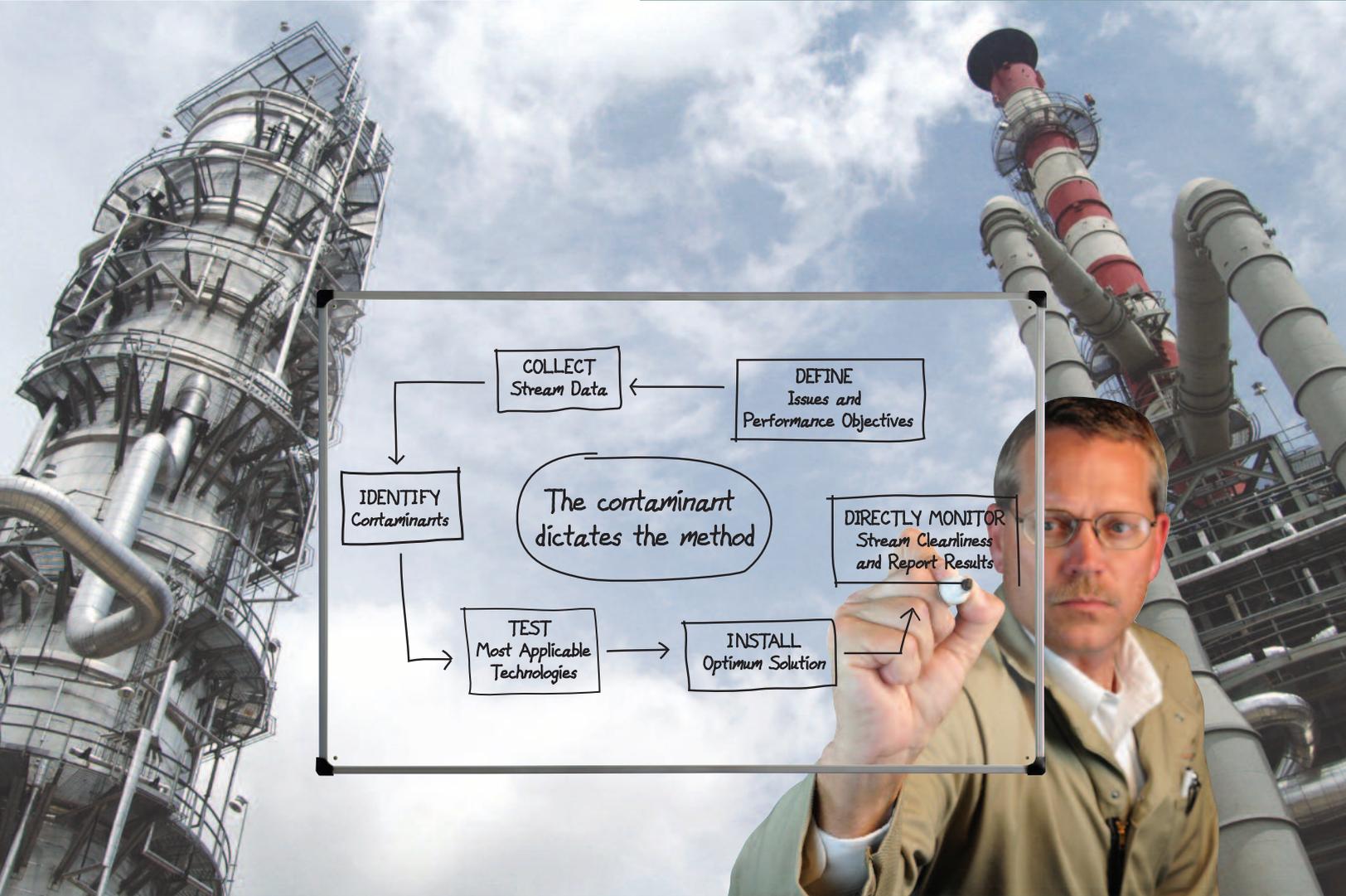


A NEW ERA IN **FILTRATION PERFORMANCE & INNOVATION**



Coalescing. Filtration. Separation.

Working tirelessly with industry partners, PECOFacet creates unique and successful solutions for today's pressing contaminant management issues.

PECOFacet excels in development and implementation of contaminant management solutions that perform in the most rigorous applications.

The increasing use of "opportunity crudes" presents many processing issues. These crudes are heavier, and contain more sulfur, particulate, wax and asphaltenes. More than ever, contaminant management is a critical issue.

Crude characteristics and their effects on processing are more unpredictable, driving the requirement that emerging process technology perform with a wide range of crude characteristics. Likewise, it is key that refiners work with a contaminant management team that offers leading filtration technologies that perform under a broad range of contaminant and loading characteristics.

PECOFacet is a leader in the development and implementation of contaminant management solutions that perform in the most rigorous applications. Our culture of "letting the contaminant dictate the method" of filtration is what sets us apart.

Our process starts with analyzing process streams and identifying the contaminant characteristics. Then applying a solution that is geared toward the full spectrum of contaminants that are likely to challenge the process.

We develop remarkable engineered products that perform in filthy, unpredictable applications with a wide variety of contaminants. Our solutions minimize maintenance time and costs, while improving overall process performance.

With a deep portfolio of Leading Technologies, Commercial Value, and Global Synergies, PECOFacet delivers innovative filtration solutions that address refineries evolving needs.



In the refining industry
**no one solution
works for all**
applications, and no
two refineries' issues
will be the same.



It is essential to
**correctly identify
a problem** to find
the proper solution.

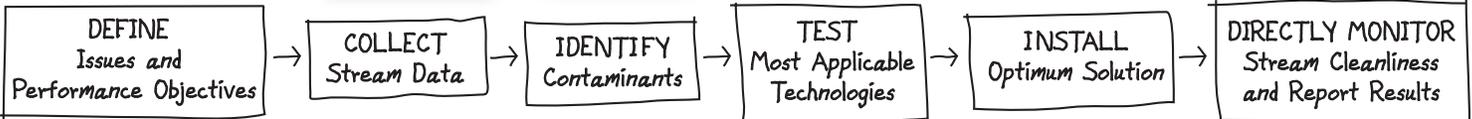


At PECOFacet,
**the Contaminant
Dictates the Method**
of contaminant control.



PECOFacet uses proprietary processes to identify contaminant characteristics and performance objectives. The result is optimum solutions that are flexible enough to provide options as the service dictates.

HOW PECOFacet SUPPORTS THE PROCESS



Plant-Wide Filtration Evaluation & Consultation

- Sales & Product Engineers
- Filtration Scientists
- Decades of Process Experience

Onsite & In-house Analytical Services

- Filtration Labs
- Mobile Testing & Data Collection

Feedback

- Detailed Reports containing photos, data, observations and recommendations
- Report Presentations

Product Trials

- Testing Equipment for bench, pilot or full scale trials
- Lab Testing with customer samples
- Product Samples
- Field Engineers

Broad Product Offering

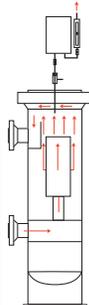
- Sustainable Solutions
- Advanced Technologies
- Conventional Products
- Disposable Products
- Reusable Products

Real-time Cleanliness Monitoring

- Fixed Intelligent Contaminant Monitors
- Online Monitoring & Alert Service
- Mobile per diem Monitoring Service



DCM ANALYSIS



DCM ANALYSIS



PlantGard®



Around the world, PECOFacet strives to be the first choice in providing innovative technology that drives safe, cost effective and sustainable solutions in contaminant management.

INNOVATIVE



Gemini PuraSep® Submicron Gas/Liquid Coalescer for Ultra-Low NOx Applications

More than ten major petroleum-refining corporations are currently using the Gemini PuraSep in Ultra-Low NOx fuel gas applications. Many gas streams require submicron gas/liquid coalescing, but the process conditions are too challenging for conventional vertical coalescers. The Gemini PuraSep employs patented PECO technology to filter particulates and coalesce submicronic liquids. Carryover is typically no more than parts per trillion even under the most demanding process conditions. Element life is substantially longer than conventional coalescers and the Gemini PuraSep is easily configured for high volumes of contaminants including slugs. Make a difference!

Slash maintenance on Low NOx fired equipment by installing the state-of-the-art Gemini PuraSep on your next fuel gas project.



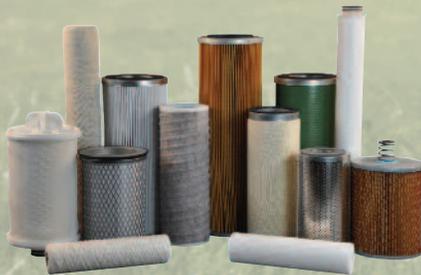
VCS Series Liquid/Liquid Coalescers improve haze ratings.

For Illustration Only

Filter Elements

PECOFacet manufactures a complete line of OEM and standard filtration products. These include pleated, string, depth, and bag filter elements, as well as, stainless steel cleanable filter elements strainers, activated carbon and clay. Our mission is to serve your complete filtration needs from basic MRO filter supplies to advanced filtration and coalescing technologies.

Utilize our strength and commitment to service by partnering with PECOFacet for filtration and contaminant management.



COST EFFECTIVE



GoldXtream™



Radially Pleated

GoldXtream™ Gradient Optimized Filter Cartridge and 55HD Series Vessel for Amine and Catalyst Bed Feed Applications

Amine and feed stock applications in petroleum refineries often contain large amounts of highly diverse particulate contaminants. GOLDXtream is engineered with up to eight filter media in a single cartridge, maximizing filtration efficiencies on a broad range of contaminants. GOLDXtream will challenge gels, agglomerations, hydrocarbon sheens, and rigid particles simultaneously. This ensures that, despite feed sources or process conditions, maximum filtration performance is achieved with a single element configuration. Often it is possible to achieve many times the element service life when compared to conventional and radial pleated elements.

Join the growing list of refineries that have converted to GOLDXtream and profited from improved process performance and lower filtration costs!



VCS Series Liquid/Liquid Coalescer for Final Dewatering In Storage and Loading Applications

The VCS Series Liquid/Liquid Coalescer is installed in refineries, airports, and fuel terminals around the globe. It features a rugged, time-tested design that lands it solidly at the top of its class.

HP Series Liquid/Liquid Separator for Bulk Liquid Separation In Feed Stocks, Intermediates and Processing Applications

Install the HP Series in the liquid feed to catalyst beds and reactors that are sensitive to free water. It will remove water slugs and entrained water droplets saving costs on regeneration and bed replacements.

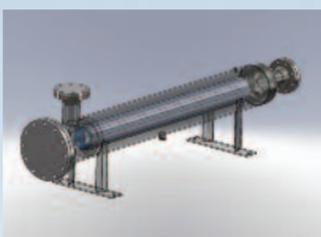


RELIABLE



75 Series Gas Filter Separator for Compressor Protection and Other Gas Filtration and Separation Applications

Series 75 filter separators set the standard for reliability and performance in refineries for decades. Filter separators remove solids and liquids from gas streams, protecting compressors and other critical equipment. Standard construction includes the exclusive PECO Quick Opening Closure, z-bar 4 point element supports, and high efficiency mist extractors. Mist extractor options include wave plate vane, wire mesh, and the PECO cyclotube. PECOFacet offers many design options, making it possible to optimize for specific services.



Surge™ High Flow Liquid Filtration Elements and Vessels for Large Volume, Extended Service and Small Foot Print Applications

PECOFacet specially developed the Surge product line to deliver performance on many levels. Maximum flow capacity per element is 500 gpm. This makes a high flow system particularly suitable for small foot print installations often found in today's refineries. It also, permits the installation of an extended life or large volume system that takes up less space than a conventional filtration system. And, with up to forty times fewer elements, servicing the system requires much less time. **Surge filter elements and high flow vessels save time, space and money.** Get on board with the Innovation at PECOFacet. Consider a Surge High Flow System for your next fluid management project.

Series SCF Self-Cleaning Filters

SCF self-cleaning filters have proven their efficiency in the refining industry by allowing continuous filtration of different fluids with a heavy, solids loading. The functioning is fully automatic because the filter elements are periodically cleaned by an automatic and sequential backwash.

Poromet™ Cleanable Stainless Steel Elements for High Temperature and Corrosive Applications

Poromet elements are particularly suitable for back-flushing and repeated cleaning for applications requiring an accurate degree of filtration down to 10 microns absolute.





Taking Contaminant Management to THE NEXT LEVEL

SPS field engineers measure and identify contaminants affecting your processes and consult with you to mitigate contaminant problems that limit process, operational, and maintenance performance objectives.

What sets us apart?

SPS field professionals use state of the art equipment and methods specifically developed to withstand the rigorous demands of the refining and oil & gas process industries. Our expertly trained engineers characterize and quantify contaminants on-line and in real time.

Our Thorough Process – An Integrated Approach

We work with you to understand your processing objectives. Using a combination of proprietary methods and equipment, SPS will first detect and measure a full spectrum of contaminants; from sub-micron species through bulk liquids and solids. This provides a complete 360-degree picture for defining contaminant sources. We then consult with your team to provide solutions that meet your operating goals. Third, we validate effectiveness of equipment solutions through on site performance verification. SPS is your source for innovative technologies and services aimed at keeping you ahead of today's contaminant management challenges.



The Benefits

- Increase the return on investment in process equipment — Reduce unscheduled maintenance expenses and improve economic performance of process equipment
- Mitigate risks and avoid unplanned downtime
- Troubleshoot and resolve costly contaminant related process, maintenance and operating issues
- Provide performance verification for filtration, separation and coalescing equipment
- Improve overall process reliability
- Validate feeds and fuel quality to critical equipment
- Manage catalyst bed life cycle — Optimize catalyst and molecular sieve bed life
- Reduce product, water and solvent losses
- Avoid contaminant related equipment damage
- Improve equipment performance

PlantGard®

Gas Stream Contaminant Management System

PlantGard is a leading-edge contaminant management tool that **feeds continuous, real-time intelligence to users** by defining gas stream cleanliness.



Continuous measurement and surveillance of gas stream cleanliness, data logging, report generation and remote alarm notification via Web, DCS, or mobile telephone – 24/7

When running low NOx and Ultra-Low NOx gas fuel systems, high contaminant levels cause a broad array of problems that can be avoided with the installation of a PlantGard system.

The Benefits

- Improve the reliability of gas fired turbines, heaters, furnaces, and boilers
- Prevent unforeseen contaminant related equipment damage
- Predict and avoid contaminant related equipment performance issues
- Track contaminant trends and use for troubleshooting

Features

- Continuous on-line surveillance of gas cleanliness
- Real-time notifications and alarms via web, cell phone or DCS
- Automated report generation and data logging

