"Measure the Difficult to Measure" Tracerco invites you to be a part of our 2019 Innovative Process Diagnostics Symposium



Providing Insight Onsite



Tuesday, May 21, 2019 8:00 am - 3:30 pm Battleground Golf Course - The Sycamore Room 1600 Georgia, Deer Park, TX 77536

Learn from our team of experts how Tracerco's process diagnostic technologies can be applied to help improve plant operations in your facility. This symposium is designed to give refinery and chemical process personnel an understanding of how our products and services can be used to diagnose critical process issues. The symposium contains in-depth case studies illustrating how data obtained from our gamma scanning, nucleonic instruments and tracer technologies can be applied to help troubleshoot and resolve process plant problems.

At the end of the symposium, Tracerco's panel of experts will host a Q&A session discussing the latest industry challenges and how to measure the difficult to measure process issues.

Agondo

This symposium will provide you with an understanding on how ...

- Gamma scans can help you understand if your trayed or packed tower has a mechanical, design or operational issue.
- The patented FrothView[™] technology is used as a quantitive tool to determine total tray froth and %flood.
- To quantify the degree of liquid maldistribution in packed towers.
- The value of baseline and pre-turnaround scans are used to detect subtle changes, evaluate the effect of tower revamps and assist with turnaround planning.
- To detect the cause of off-spec product due to heat exchanger leaks and how to pinpoint the leaking exchanger(s).
- To obtain an independent verification for flow meters to help you confirm data reported for environmental purposes is correct.
- To identify fugitive flow in flares and other systems in addition to determining the origin of where the problem is occuring.
- To detect leaking valves to determine if flow is bypassing the valve.
- To troubleshoot and optimize FCC performance.
- Nucleonic gauges are used to control a range of industrial process system levels, interfaces and material densities.

Who should attend:

Process Engineers Mechanical Engineers Technical/Operations Managers Plant Managers

| Agenda | |
|---------------------|--|
| 8:00 am - 8:30 am | Continental Breakfast |
| 8:30 am - 8:45 am | Welcome |
| 8:45 am - 10:15 am | Troubleshoot and diagnose |
| | hydraulic conditions within trayed and |
| | packed towers |
| 10:15 am - 10:30 am | Morning break |
| 10:30 am - 11:15 am | Locate leaks no matter how small |
| 11:15 am - 12:00 pm | A complete understanding of flows |
| | throughout the entire facility |
| 12:00 pm - 1:00 pm | Lunch provided (Fajitas) |
| 1:00 pm - 1:45 pm | The diagnostic tools to look inside |
| | FCC's and optimize performance |
| 1:45 pm - 2:00 pm | Afternoon break |
| 2:00 pm - 2:45 pm | Take control of your process using fixed |
| | density measurement gauges |
| 2:45 pm - 3:30 pm | Q&A Panel Discussion - Challenge Us |

Planners/Schedulers Reliability Engineers Turnaround Coordinators Maintenance Personnel

Register on-line at http://info.tracerco.com/may2019_symposium Email margaret.bletsch@tracerco.com or call 281 291 7769

Troubleshoot and diagnose hydraulic conditions within trayed and packed towers

Lowell Pless, B.S. ChE, PE Consultant for Tracerco

Case studies will show how our patented FrothView[™] technology is used to provide quantitiative information about the useful capacity of fractionation towers. Learn how the % tray space is shown to correlate well with % flood.



View examples on how to accurately diagnose

liquid maldistribution problems in packed towers and how Tracerco's PackView[™] liquid retention scale is able to provide a representation of the spread in density from the lightest to the heaviest density. Learn how ThruVision[™] technology provides a more detailed distribution profile for maldistribution at a specific elevation. Case studies will illustrate how ThruVision[™] is also used to monitor wash beds for coke build-up.

Locate leaks no matter how small

William Mixon, B.S. ChE, Market Manager-Process Diagnostics

Gain insight on methods to detect leaks when you see evidence a product stream is off-specification or a process stream becomes contaminated. Where among all this piping and equipment could a leak be occurring? This session will discuss the advantages of a quick, easy and accurate on-line testing technique that has been used to successfully identify leaking heat



exchangers in a wide variety of process applications. A series of case studies will be presented to illustrate various examples that has saved our customers a significant amount of maintenance costs by narrowing the leak to a specific exchanger.

A complete understanding of flows throughout the entire facility Andy Burleigh, Senior Technical Advisor

This session showcases techniques to measure velocity/flow and build-up in piping, identifying leaking valves and detecting fugitive flow in flares and other systems. The presentation will provide plant personnel insight on how these methods can help identify and measure issues throughout the facility to troubleshoot and optimize production.



The diagnostic tools to look inside FCC's and optimize performance

William Mixon, B.S. ChE, Market Manager-Process Diagnostics

Case studies will show how advanced scanning and tracer technologies are used to measure the velocity, distribution and residence time of the catalyst or vapor phase through any part of the system. This includes testing to determine the efficiency in the riser, termination devices efficiency, and diagnose potential issues with cyclones or distribution devices.



Take control of your process using fixed density measurement gauges

Eric Graham, Specialist Measurement Global Commercial Manager

Level and interface measurement or control plays a key role in the efficient operations of any facility. We will discuss how nuclear measurement is achieved, as well as the applications, capabilities and limitations of the equipment options available.



Q&A Panel Discussion - Challenge us with your most difficult to measure issues.

In this panel discussion we encourage our attendees to bring questions and problem situations they are experiencing for discussion with our panel experts. Our team of experts featured on the panel are:

William Mixon - William earned his B.S. ChE from Louisiana State University and started his career with Tracerco in 1996. He has been involved in the development of Tracerco's tracer applications, FCC diagnostics and our ThruVision[™] technique for packed towers. William is a member of the American Institute of Chemical Engineers.

Lowell Pless - Lowell is a consultant to the refining and chemical industry with over 40 years of experience in mass transfer diagnostics. Previously with Tracerco for 32 years where he specialized in distillation diagnostics. He earned a BS degree in Chemical Engineering from the University of Texas at Austin, is a registered Professional Engineer by the State of Texas, participates on the Design and Practices committee for Fractionation Research (FRI) and is a member of the American Institute of Chemical Engineers.

Ron Carlson - Ron has 28 years of field experience in Process Diagnostics and a vast knowledge of our Tru-Scan[®], Tru-Grid[™] Scan and ThruVision[™] technologies used to optimize and troubleshoot trayed and packed towers. Ron was instrumental in the development of our ThruVision[™], FrothView[™] and PackView[™] technologies.

Andy Burleigh - As a Senior Technical Advisor for Tracerco, Andy has over 18 years experience in both field projects and technical support to clients. His role involves the opportunity to interact with clients on a daily basis to help them solve their process issues utilizing Tracerco's services.

Eric Graham - For the last 4 years, Eric has been involved, commercially and operationally, in the Specialist Measurement sector of Tracerco. Coupled with 8 years of experience in Process Diagnostics, Eric has utilized his process knowledge and understanding to offer a unique insight into instrumentation applications and design.

Register on-line at http://info.tracerco.com/may2019_symposium Email margaret.bletsch@tracerco.com or call 281 291 7769