

Heat Transfer Fluids • System Cleaners • Application Expertise • Superior Service

Launching a new Paratherm **UPGRADE**

Over the past year, Paratherm has been busy and excited while we upgraded our on-site lab with a new thermal stability oven. This high temperature oven expands upon our R&D capabilities and cements us as a leader in the heat transfer fluids industry. Our Technical/Lab Manager, Ed Cass discusses the exciting impact our new oven provides our customers.

1. *What is a thermal stability oven?* In our industry, thermal stability refers to the heat transfer fluids inherent resistance to thermal stress experienced in heating equipment. Our thermal stability oven will be used to run a highly specialized ASTM method to conduct thermal stability testing. This critical testing enables us to thoroughly assess high temperature stability of our products under controlled conditions.

2. *Upgrading our lab with a new, industrial oven has been on your project list for a while. Why was it so important to you that Paratherm acquire one?* As a first-class supplier of premium heat transfer fluids, it has always been important to us that we thoroughly vet our products and assign

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A Note from Our Business Director

"In life, change is inevitable. In business, change is vital."

— Warren C. Bennis



We are all living in the exciting times of change, especially with regards to technologies. So, we at Paratherm, must be looking at all technologies (Product and Service) to assure that we are ahead of the curve to better serve our customers. As a brand of Lubrizol, we know that we have the finest resources available for excellent R&D, Product Quality, and services technologies. We must make continuous improvements in our processes to assure the best for our customers. Combining the vast knowledge of the Paratherm team with that of the greater Lubrizol team, Lubrizol is now a leader in products for Electric Vehicle Battery Thermal Management and Immersion Coolants for mega Server operations. The more we learn in these alternative technologies, the more we can apply this knowledge back into the Industrial Heat Transfer Fluid applications. Our customers will benefit from this growth! With change always happening, we must continue to personally be available for you, our customers, to support technically and to provide a premier product for your immediate requirements.

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maximum temperature ratings responsibly. Historically, we have outsourced this specialized thermal stability testing to trusted 3rd party lab partners, and compared this data to “real life” results that we get from in-service samples from our customers to establish appropriate temperature limits. Adding the capability in-house allows us to further substantiate existing claims, and allows us to run benchmark testing against competitive fluids. It also gives us the capability to assess new fluid chemistries for future product development.

Overall, having the ability to run the testing in our own laboratory gives us a competitive advantage, that also saves us substantial resources we would have otherwise exhausted with our 3rd party partners.

3. *What types of tests do you perform using the lab oven here at Paratherm?* Our new stability oven is dedicated to running thermal stability testing to ASTM methodology. In the future, we can look more closely at custom programming the temperature profiles and test durations to further extrapolate stability performance even under varying conditions. The testing is designed to mimic the conditions inside of a fired heater tube. Typically samples are held isothermally at the expected film temperature for 500hrs. From preparation of samples to final analytical processing, one test with 8 unique samples will take about 8-10 weeks to complete.

4. *What is your favorite benefit or feature of having the new lab oven?* Most labs running this test can only run 2-3 unique samples simultaneously. Our testing is highly unique, fully customized to run 8 different samples simultaneously under a nitrogen atmosphere. Therefore, we have significantly higher throughput (more comparative data per test) and the test is inherently safer and more reliable due to the nitrogen atmosphere.

5. *How will the new oven help with your research?* The testing is according to ASTM methodology, but our overall design is customized. Therefore, we spent a lot of time learning exactly how to run the test (safely) and perform all of the associated analytical work. We are still in the early stages of gathering initial data, but future research is very exciting. Due to the expanded throughput of our test, we’ll be able to get side by side stability comparisons of 8 fluids simultaneously. Some of the near future work will look at more in-depth analysis of how our Paratherm fluids perform relative to one another. Longer term, we’re excited to be able to offer more stability comparisons of our fluids against major competitors. These comparisons will be great sales tools, but will also help give customers peace of mind that they’re selecting the most appropriate products. As an industry leader, we will also continue to look for product technologies that deliver performance and value to our customers, so the testing will also be very useful for identifying candidate fluids that can “take the heat”.

Employee Spotlight—Ericka Holcomb

Ericka Holcomb is a sales account manager for Paratherm Heat Transfer Fluids, and joined the team in October 2022 to focus on business development in the chemical process industry. Ericka is based out of Houston, TX servicing customers in North America. Ericka has over 15 years of sales experience in the integrated material solutions and catalysts solutions industries. She obtained two Bachelor of Science degrees from Texas A&M University in Nutritional Science and Biochemistry, and later earned her MBA to compliment her passion for business. In her free time, she enjoys travelling the world, seeking adventure and spending time learning different cultures. One of Ericka’s favorite destinations is New Zealand; where every day is an adventure in the mountains!



Technical Tip

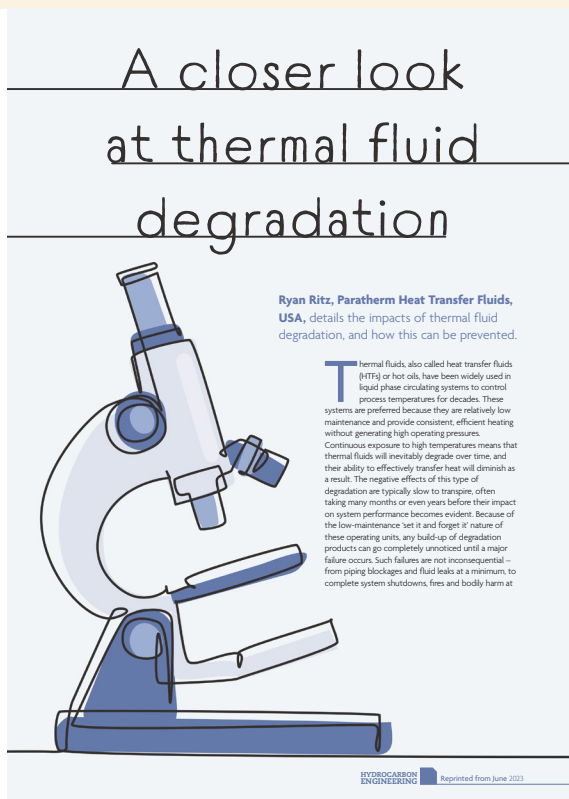
Oxidation is the leading cause of premature thermal fluid degradation. Many heat transfer systems that are prone to oxidation end up

needing partial or full replacement of fluid after just a few years of service, even though the operating temperatures are fairly mild. This is because oxidation causes solids and sludge build up, which can foul heat

exchange surfaces, plug lines and diminish performance of the entire system. Oxidation occurs when warm or hot fluid reacts with oxygen in atmospherically vented expansion tanks. Oxidation is easily resolved by installing an inert gas blanket (such as nitrogen) on the expansion tank. In lieu of an inert gas blanketing system, some installations have success in reducing the effects of oxidation by installing a cold seal pot, thermal buffer tanks, side stream filtration, or otherwise reducing the overall temperature of the expansion tank. For more tips on managing oxidation, visit the Paratherm Library and search “oxidation”.

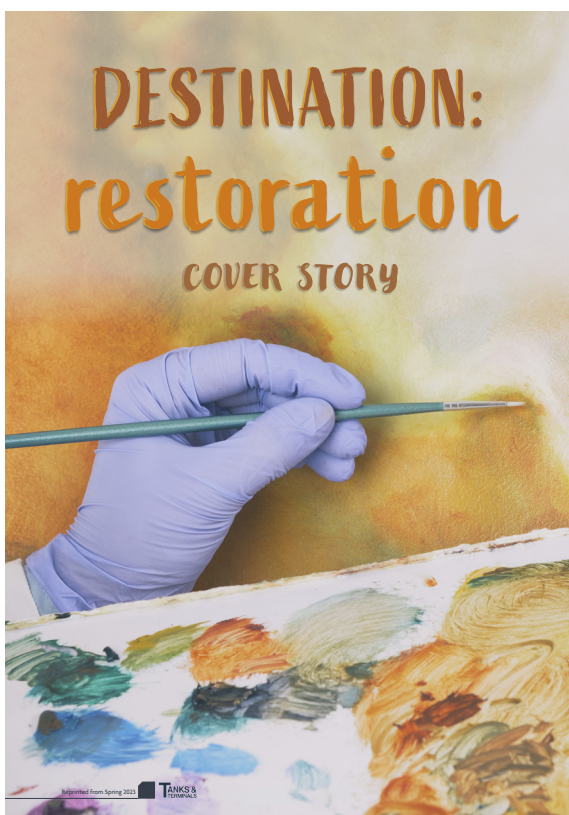
Ryan Ritz

Fluid degradation is one of the most common causes of fluid breakdown. In the June issue of *Hydrocarbon Engineering* magazine, Ryan Ritz gives a closer look at the dynamics of fluid degradation and how to apply the knowledge and take action.



Ed Cass

Did you miss our cover story in the Spring 2023 issue of *Tanks & Terminals*? Ed Cass's article, "Destination: restoration" discusses how to replace fluid and restore performance in fouled heat transfer systems.



TRADE SHOWS



ILTA

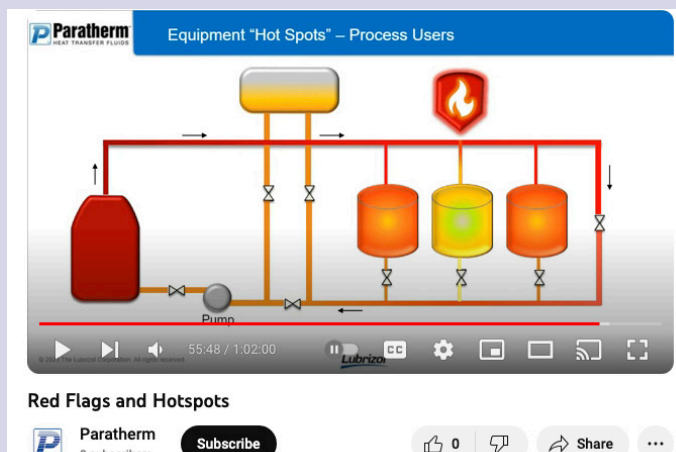
May 22-24, 2023
Houston, TX
Booth #532

PROCESS HEATING & COOLING

May 24-25, 2023
Chicago, IL
Booth #407

NORA

November 8-10, 2023
San Antonio, TX
Booth #300



ON - DEMAND WEBINAR

RED FLAGS AND HOT SPOTS:

Ways to Avoid Major Issues with Your Thermal Fluid System

Thermal fluids (heat transfer fluids, hot oils) are widely used across processing industries for their ability to provide uniform, reliable and efficient temperature control throughout an entire heated/cooled process. The technology provides a relatively safer and lower maintenance alternative to options that use steam

or direct fire heating sources. Due to these inherent advantages and the “set it and forget it” nature of today’s thermal fluid heating technology, these processes get overlooked and taken for granted all too often... until there is a problem. This webinar focuses on the red flags and warning signs that can be acted on quickly

and easily before they compound to create a downward spiral of expensive and/or dangerous failures. To watch this on demand, go to our website, **Paratherm.com/resources/library** to view this webinar along with past webinars for your convenience.

Paratherm is leveling up!

Levels are a simple tool that have various uses. They can be used to measure or draw a straight line. It’s a tool that is used to determine whether a surface is horizontal or vertical. You really can’t build a house, at least one that works well or looks nice without a level.

Similarly, just like in life, the level is all about balance. It’s a reminder to keep a level mindset. The level



provides a focus to stay on track when approaching difficult tasks. Like an inner voice, the level encourages you to stay centered

when things get chaotic.

So, however you choose to use your new level, we hope it provides the balance you need.

