PDH (Propane Dehydrogenation) AIR HEATERS

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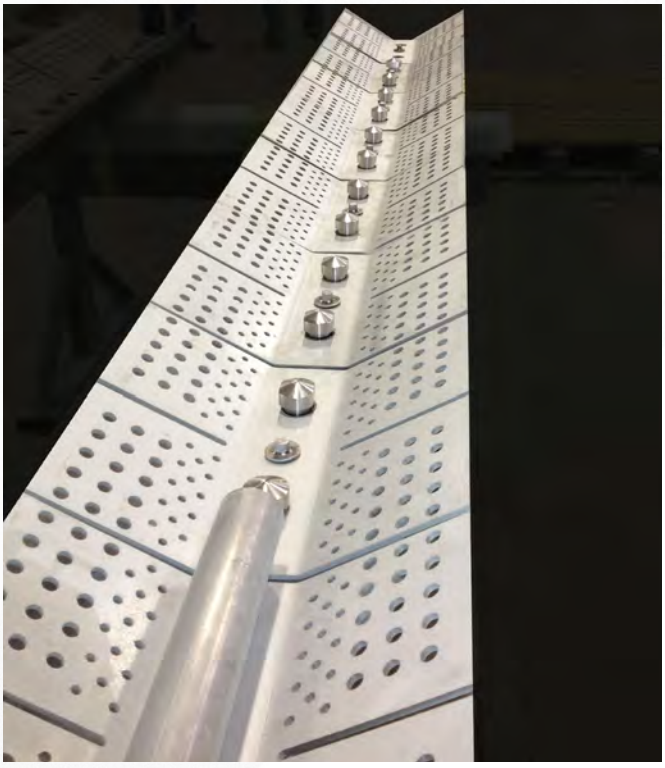
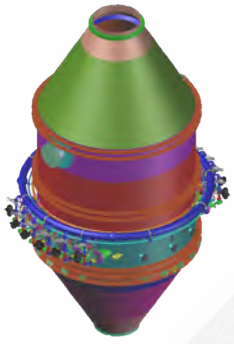
Equipment Built to Withstand Extremes

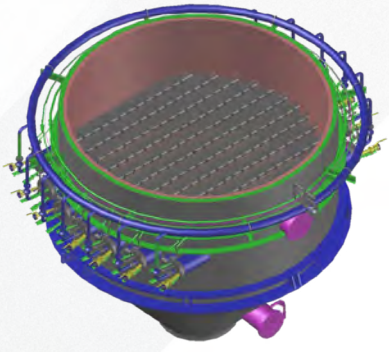
Propane Dehydrogenation (PDH) regeneration air heaters must operate reliably through extreme gas velocities, high heat releases of up to one billion Btu/hr, fuel composition variations, temperature/pressure fluctuations, and more. Zeeco's robust vessel, burner, and mounting system design deliver dependable results in harsh conditions and provide lower emissions, improved reliability, and exceptional flexibility for the long term.

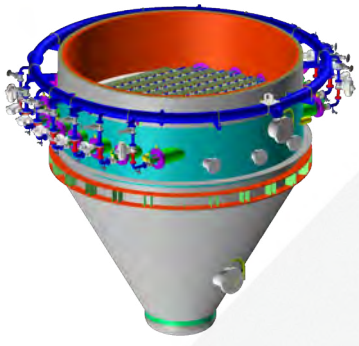
PDH heaters are critical components in chemical plants, and a shutdown due to heater problems can easily cause massive production losses. ZEECO® PDH air heaters can generate high heat release over a wide variety of fuel gas compositions, making them a flexible choice for chemical processing plants. Designed through the use of advanced Finite Element Analysis (FEA) and extensive Computational Fluid Dynamics (CFD) modeling and field-proven in numerous installations, Zeeco's PDH air heaters set the industry standard for reliable performance. From vibration challenges to air turbulence within the vessel, Zeeco's experienced team has met the challenges of PDH air heaters head on.



The PDH process generates propylene from a propane feedstock through the catalytic conversion of propane into propylene and hydrogen. Large single train capacities for these process units require extremely high heat release from the air heater for continuous regeneration of the offline reactor beds. That's why Zeeco's PDH air heaters are housed in a vessel we specifically engineered to withstand the high operating pressures and temperatures required by the process. The heat inputs are supplied by an array of **ZEECO DB-series duct burners** that deliver even heating across the entire cross-section of the air stream.

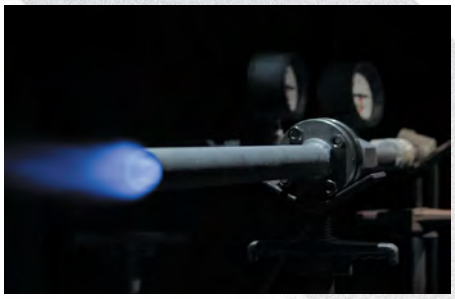






Standard Design Features

- DB-series duct burners for even heating, reliable performance, and high heat release
- Fires reliably on varied fuel compositions
- Designed for lower emissions
- Designed so that operators can minimize pressure drops
- Designed to ensure optimal temperature homogenization at the outlet of the heater
- Proprietary internal mixing devices for even heat distribution
- Refractory material selection and mechanical design provides strong, abrasion-resistant lining
- Engineered to minimize and withstand known PDH process challenges such as equipment vibration and refractory cracking
- ZEECO AR/GS pilots installed on each burner assembly for reliable ignition



The Zeeco Difference

By concentrating on what we do best, Zeeco has grown into a worldwide leader in combustion and environmental solutions. We are a privately held company whose ownership stays highly involved in daily operations, with upper management comprised of the world's leading combustion experts.

When you call Zeeco, we answer. When you make a request, you get a quick, efficient response. We are lean and efficient, able to make decisions quickly, without bureaucracy and red tape. Our sales, engineering, and purchasing groups work hand-in-hand to deliver highly competitive quotes and heroic turnaround times. We stand ready and willing to travel anywhere in the world to discuss upcoming projects firsthand, and to ensure that every existing project runs seamlessly.

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Visit zeeco.com/contact for additional Global Location contact information

NSF REGISTERED ISO 9001: 2015

Certification applies to Zeeco Headquarters.

GO ZEECO®

Choose to work with our dedicated, flexible, and innovative team, and you won't be disappointed. Call or email us today to request a quote or to learn more about our proprietary combustion systems.