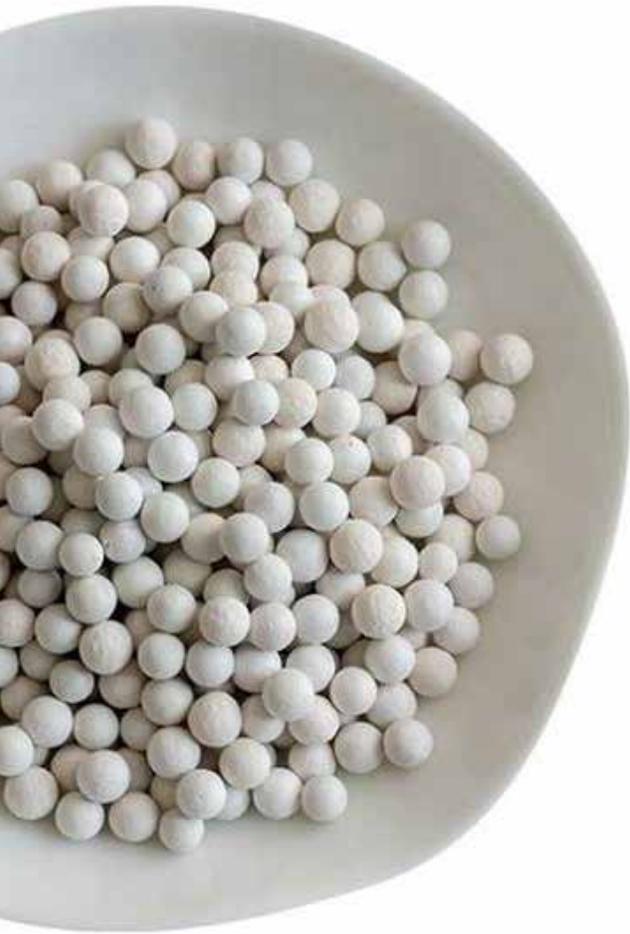




IMPROVE EFFICIENCIES IN CATALYST COOLING

INNOVATIVE TECHNOLOGY FOR ENERGY-EFFICIENT OPERATIONS



Optimized cooling

During both the production and regeneration phases of the catalyst life cycle, cooling is a vital step that enables operators to ensure optimal quality, preserve cracking sensitivities and mitigate material degradation and deactivation.

Solex Thermal Science offers an indirect heat transfer solution for catalyst production and regeneration that reduces energy consumption, eliminates emissions, minimizes product abrasion and offers the ability to recover low-grade energy in small, medium and large production capacities.

The Solex Advantage

Our patented* technology allows for efficient heat transfer with an innovative welded plate design. The combination of proprietary thermal modeling software and guaranteed mass flow design results in uniform temperature profiles while providing low energy consumption and near-zero emissions.

Additionally, the compact and efficient use of the heat transfer area not only provides optimal utilization for cooling catalysts, but also allows for the potential to recover low-grade heat, if necessary.

Solex's advanced thermal modeling, rich reference list and years of experience in this field makes Solex the ideal partner for your next catalyst cooling application.

*www.solexthermal.com/resources/patents



PATENTED* TECHNOLOGY THAT MAXIMIZES ENERGY EFFICIENCY

Increased energy efficiency

The indirect heat transfer medium flowing inside the Solex heat exchanger plates is working with sensible heat to provide thermal efficiencies better than 90%. The discharge device controlling the catalyst flow requires very little power as it works with gravity.

Waste heat recovery

The heat from the catalyst can be recovered in a wide range of input mediums, including steam, condensate or hot water — allowing for energy savings. Heat recovery loops can be optimized for maximum energy recovery and operational flexibility.

Efficient heat transfer

Solex indirect heat transfer technology allows for accurate control of the temperature of catalyst regardless of variable input temperature conditions. This level of control ensures product quality is maintained and the capacity of the overall system is not compromised.

Low abrasion and near-zero emissions

The mass flow design of the heat exchanger ensures uniform material flow controlled at low velocities, further ensuring the gentle handling of catalysts during cooling. In addition, the cooling media does not come into direct contact with the catalyst, so no dust or emissions are created. This eliminates the need for pollution control equipment and makes tight emission limits easier to meet. It also eliminates degradation or wear to the exchanger or heat transfer plates.



Reduced installation and operating costs

The vertical configuration of the Solex heat exchanger means it requires a small installation footprint, allowing it to easily retrofit into existing and new plants. The unit may also be configured with modular exchanger banks, making it ideal for debottlenecking and capacity increases.

Solex technology is designed to operate without moving parts, offering simple installation, low maintenance and years of reliable operation. The custom design reduces downtime and lowers maintenance expenses by incorporating easy access to the heat transfer areas for cleaning, removal and isolation of individual plates, if required.



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