



THERMINOL

Heat Transfer Fluids by Eastman

Chromalox and Eastman Therminol meet high-temperature demands

PROBLEM

A chemical production plant required a jacketed reactor to enable high-temperature processing.

ANALYSIS

The plant searched for a sealless pump that could manage the high temperature and pressure.

SOLUTION

Eastman Therminol® 72 heat transfer fluid was selected for the newly installed 150-kW Chromalox CLD Hot Oil System with sealless pump.

RESULT

The plant successfully maintains extremely high temperatures and meets required third-party and American Society of Mechanical Engineers (ASME) codes and standards.

Recently, a chemical production plant determined that it needed a jacketed reactor to maintain a high temperature of 690°F (365°C) for its processes. The plant, which produces specialty extreme-performance lubricants, fluids, and greases for the aviation and aerospace markets, required a sealless pump instead of a standard water-cooled and mechanically sealed pump to manage the high temperature and pressure. Enter Chromalox.

Founded in 1917 and headquartered in Pittsburgh, Pennsylvania, Chromalox is a thermal technology company that engineers custom thermal solutions for the world's toughest industrial heating applications. Chromalox engineers worked with the plant's production team to install a 150-kW Chromalox CLD Hot Oil System with sealless pump into the chemical reactor. Therminol 72 synthetic heat transfer fluid is used to heat and recirculate through the reactor's jackets to ensure the plant's ability to maintain the high temperature.

Therminol 72 was the ideal choice, as it is suited for high-temperature processing applications that also require low-temperature fluidity. Therminol 72 was carefully formulated to minimize the formation of low boilers and eliminate the risk of insoluble high-boilers formation and fouling. Proper attention to

system design and operation within the maximum bulk and film temperatures specified will help ensure reliable operation.

Examples of equipment heated within the facility include jacketed glass-lined reactors, distillation columns, and wiped film evaporators. The system was pre-engineered to include temperature and power controls, expansion tanks, heat exchangers, pumps, valves, gauges, and all necessary piping—not only eliminating the need for component selection and assembly but also allowing for the customization required to integrate the new sealless pump.

The customized sealless pump component provided by Chromalox and the synthetic heat transfer fluid provided by Therminol has helped to maintain the intense temperatures necessary for the required chemical reactions. The effectiveness and stability offered by Chromalox and Therminol has helped the production plant meet third-party and ASME codes and standards.



For more information, visit our website, Therminol.com.

North America

Solutia Inc.
A subsidiary of Eastman Chemical Company
575 Maryville Centre Drive
St. Louis, MO 63141 U.S.A.

Telephone:
Customer Service, 800-426-2463
Technical Service, 800-433-6997

Latin America

Solutia Brasil Ltda.
A subsidiary of Eastman Chemical Company
Rua Alexandre Dumas, 1711—Birmann 12—
7º Andar 04717-004
São Paulo, SP, Brazil

Telephone:
Brazil, 0800 55 9989
Other Locations, +55 11 3579 1800

Europe/Middle East/Africa

Eastman Chemical B.V.
Watermanweg 70
3067 GG Rotterdam
The Netherlands

Telephone: +31 10 2402 111

Asia Pacific

Eastman (Shanghai) Chemical
Commercial Company Ltd.
Building 3, Yaxin Science & Technology Park
Lane 399 Shengxia Road
Pudong New District
201210, Shanghai, P.R. China

Telephone: +86 21 6120 8700

EASTMAN

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Eastman Corporate Headquarters

P.O. Box 431
Kingsport, TN 37662-5280 U.S.A.

U.S.A. and Canada, 800-EASTMAN (800-327-8626)
Other Locations, +(1) 423-229-2000

www.eastman.com/locations

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