JARYTHERM®

JARYTHERM® FOR OIL AND GAS INDUSTRY

Arkema has a strong presence in the Oil & Gas industry. Our extensive range of products used in this industry is going from molecular sieves to gas odorants, along with additives for catalyst sulfiding and polymers for transport … as well as heat transfer fluids since Arkema is involved in the manufacturing of aromatic based fluids with extensive benefits for O&G applications.

The oil industry or the oil patch, includes the global processes of exploration, extraction, refining, transporting and marketing of petroleum products.
Oil and gas processing requires the use of a specific heat transfer fluid (HTF) designed to work at high temperatures for prolonged periods. Since Oil & Gas applications are often situated in remote, hard-to-reach locations with time-to-time extreme weather conditions, it is also important to use high quality heat transfer fluids in order to maximize the performance of your equipment.

PUMPING STATION

Oil distillation and pump stations along oil pipelines require very high temperatures to maintain the viscosity of oil for smooth pumping through pipes. Heating fluid is used for sealing service in some units in the refineries. The easiest solution is to use the same oil as for process. For this application the HTF needs to have low viscosity and to be able to run within a wide range of temperatures. An HTF with low viscosity and low freezing point prevents risks of clogging after a planned or unplanned shutdown.

JARYTHERM® FOR OFFSHORE PLATFORMS

HTF are used on offshore platforms for heating and regeneration of glycols and molecular sieves that are used to remove water from the natural gas produced. In these offshore platform operations, the process temperature is in the range of 200 to 300°C (400 to 575°F).

JARYTHERM® IN REFINERIES

Oil refineries distill many oils and oil-based products by heating boilers, reactors, storage tanks and columns using heat transfer fluids. Examples include units such as Fluid Catalytic Cracking (FCC), Etherification (ETBE) Alkylation (HFA), Naphtha Hydrotreater as well as Light Naphtha Isomerization (LNI) unit. All these processes run at temperatures comprised in the range of 200 to 300°C (400 to 575°F).

JARYTHERM® IN LNG

Regarding Natural Gas processing, several key steps require heat such as acid gas removal and dehydration where heat transfer fluid is used to heat the regenerators, and downstream for the fractionation train to supply heat to the distillation columns, usually operating over 260°C (500°F).

JARYTHERM
HEAT TRANSFER FLUIDS
BY ARKEMA

WHAT IS JARYTHERM® USED FOR?

The primary purpose of using transfer fluids in a system is to transfer heat from your boiler to the equipment where a well-controlled and constant temperature is needed.
Arkema due to its history has a long experience with heat transfer fluids operating in the range of 200 to 350°C (400 to 575°F).

GOOD REASONS TO SELECT JARYTHERM®

Reduced CAPEX	Low pressure requirement: High fluid boiling point
	Standard material use: Non-corrosive toward carbon steel
Optimized OPEX	Efficient heat transfer: High calorific power
	Long fluid ageing life: High thermal stability
	Low maintenance: Limited fouling thanks to high heavies solubility
	Low energy consumption: Low fluid viscosity over temperature range
Process Safety	Non fire risks: High flash point
	Limited top up: Low formation of light impurities even at high process temperature

HOW TO MAINTAIN THE BEST QUALITY OF JARYTHERM® IN YOUR PROCESS?

All units using heat transfer fluids should operate using a proactive maintenance plan. Arkema is there to recommend solutions which encompass regular system analysis and fluid management (top-up, flash point control …).
Arkema also provides regular technical service to its customers. Arkema gives advice on the right fluid selection versus expected life time. Arkema has also developed partnerships with boiler manufacturers and EPC for the best assistance.

ARKEMA JARYTHERM® PRODUCT RANGE

Arkema has manufactured and commercialized Jarytherm® products for decades. They are synthetic aromatic based and made on purpose with a stable composition over years.

Characteristics	Jarytherm® BT06	Jarytherm® DBT
High boiling point/ ignition point	✓✓	✓✓✓
Low pour point and viscosity	✓✓✓	✓✓
Good thermal stability	✓✓✓	✓✓
Good heat transfer properties	✓✓✓	✓✓✓
Non-corrosive to materials	✓✓✓	✓✓✓
High flash point & auto-ignition temperature	✓✓	✓✓✓

JARYTHERM® PROGRAM

Arkema proposes different programs according to customer's requirements. We guarantee a long and cost effective heat transfer fluid use in your equipment. Our customer designed programs range from product supply to full fluid management.
For more details please contact us through our website (www.arkema.com).

JARYTHERM® ANALYTICAL SERVICE

Arkema provides analyses of the Jarytherm® fluid in-use.
This allows end-users to operate in safe conditions and maximize fluid lifetime.
The analyses give a clear view on the fluid ageing. Based on the results, the operating conditions and the history of the circuit, Arkema provides technical recommendations.

Characteristics	Standard method
Gas Chromatography	*Internal method*
Low boiling components %	
Jarytherm® fraction %	
High boiling components %	
Viscosity at 20°C (cSt)	ASTM D445
Flash point (open cup) °C	ASTM D92
Acidity (meq H^+ /100 g)	ASTM D664
Water content (ppm)	ASTM D6304
Insoluble materials (ppm)	-

JARYTHERM HEAT TRANSFER FLUIDS BY ARKEMA

Arkema France - A French 'société anonyme', registered with the Commercial and Companies Register of Nanterre (France) under number 319 632 790 - Date - Photos: - reference

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INNOVATIVE CHEMISTRY