



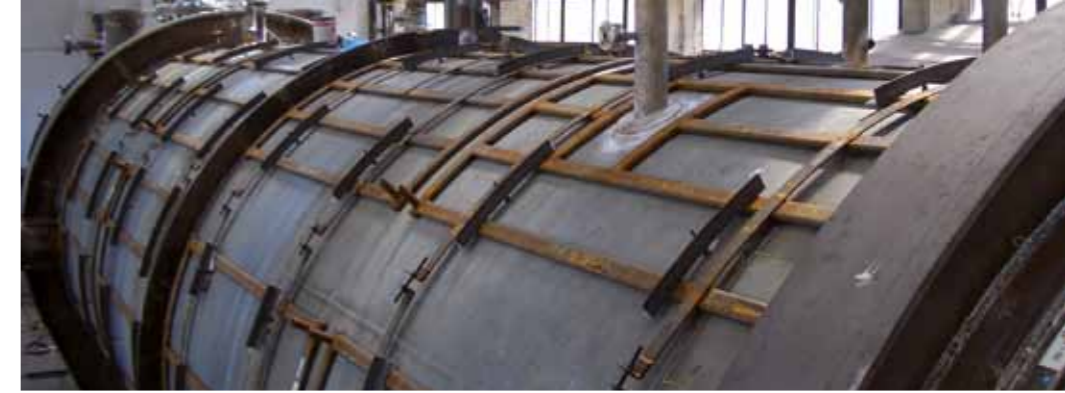
VERMEER THERMEX INTERNATIONAL

External process heating systems



**SPECIALISTS IN EXTERNAL PROCESS
HEATING SYSTEMS**

... sustainable solutions



THERMEX THERMAL MAINTENANCE SYSTEM

Vermeer Thermex International

Vermeer Thermex International (VTI) is a professional joint venture between The VE Group with 60 years of experience in process equipment and Thermex International with more than 30 years of ample experience in process heating systems. VTI designs, engineers, manufactures and supplies the ThermEx Thermal Maintenance System for piping, vessels, tanks, valves, pumps and instrumentation components. Maintaining the required process temperature enabling melt-out requirements.





The VE-Group produces in accordance with the following standards

- EN 13445
- ASME VIII div.1
- TEMA, Codap Merkblätter
- PD 5500
- RTOD

Our quality system is

- ISO 9001
- TUV EN3842-2/AD-2000
- HPO/PED97/23EC
- E 729
- U-stamp certified



Quality

Vermeer Thermex International works with a broad range of materials, including: CR steel, stainless steel and Duplex. For each individual type of weld technique and each individual type of metal, Vermeer Thermex International is the right specialist with all the necessary welding certificates.

VERMEER THERMEX INTERNATIONAL TOP QUALITY HEATING SYSTEMS

Supply

- All prefabricated TE elements or TE panels: Standard rating 10 barg – 260°C, higher rating is available on request
- All installation hardware: Band-It, Bolting, Clips, Straps and Heat Transfer Mastic
- Interconnecting jump-overs to connect all parts of the TE system. Different type of jump-overs are available
- Installation drawings of the ThermEx Thermal Maintenance System and the CE/PED documentation
- Installation manual
- Site supervision on request

Design: Thermal analyses

Based on received information such as: process data, material take off lists, eventual isometric drawings, a thermal analyses is performed to determine the quantity of elements needed to guarantee the specified temperature. This is done during front end engineering and design phase.

Engineering: Compliant to CE/PED

- Detail engineering and thermal calculations based on final process data and isometric drawings at order intent phase
- Optimized heating medium routing specifying the supply and return locations as well as the preferred manifold locations
- Calculation of steam consumption (for steam supplied systems)
- Installation drawings of the ThermEx Thermal Maintenance System
- The ThermEx Thermal Maintenance System will be designed, classified and manufactured in accordance with ASME Code VIII Div 1, compliant to CE/PED



Manufacturing: Fully traceable

- Prefabrication in our shop of all TE elements or TE panels, individually pressure tested and tagged
- Materials are fully traceable (material and test certificates)
- Design codes: ASME, BS, AD Merkblatt, EN 13445



... sustainable solutions

Processes that require process heating

- Sulfur
- Bitumen
- Polycarbonates
- TDI
- MDI
- Caprolactam
- Phthalic Anhydride
- Maleic Anhydride
- Delayed decoking processes
- Waxes

Industries

- Oil & Gas
- Chemical
- Petrochemical
- Pharmaceutical
- Offshore

DELIVERY PROGRAM

Applications:

- Piping from 1/2" up to unlimited
- Vessels (Degassing vessels, Coolers)
- Drums (Knock-out)
- Storage tanks up to a OD of 35 meter

Clamp-on Heating jackets

The ThermEx Clamp-On Heating jackets are used for components as the alternative to welded-on or cast-on heating jackets, suitable for valves, pumps, meters and all in line equipment.

A carbon steel pressure chamber is embedded in an aluminum body covering and heating the component, its process flanges and eventual the mating flanges.

- Easy to install and to disassemble
- All components remain line-sized

Piping

The ThermEx Thermal Maintenance System is used in several piping applications to keep the process flowing, to prevent cross-contamination of the heating medium and the process medium, or, vapor condensation on the pipe wall.

The combination of its cost advantage over jacketed piping and its thermal and reliability advantages over tube tracing make it an attractive thermal maintenance solution for most processes. The system is made of carbon steel boiler tubing, deformed to a rectangular section mating having on one large side the radius of the pipe to be heated.

Vessels, drums and storage tanks

The ThermEx Thermal Maintenance System is used as an external heating system on vessels, drums and storage tanks. In cases where contamination from internal coil leaks cannot be tolerated and/or the wall temperature uniformity is critical to prevent condensation and corrosion. Through the TE elements steam, hot oil or glycol water is conveyed as heating medium. The heated TE elements will transfer the heat at first to the vessel/drum/tank wall and secondly to the process medium. The shape of the rectangular sections provides a wide heating surface to its component guaranteeing an optimal heat transfer. The use of heat transfer mastic between TE-system and wall will avoid any air-gap and additionally will act as corrosion barrier. Constant and equal heating will avoid cold or hot spots.

BENEFITS

Compared with Jacketed Piping

- Cross contamination free: the TE system is not welded avoiding the heating medium getting in contact with the process medium or vice versa. Cross contamination caused by corrosion or welding-failures is impossible
- An engineering product performance guaranteed: the TE system is based on thermal analyses
- Less steam consumption: the TE system uses just enough steam to maintain the required temperature instead of constant heating the pipe (OPEX)
- Less expensive (CAPEX)
- Process pipes can be butt welded instead of flanged spools for jacketed piping
- All in-line components remain line-sized
- Much less expansion loops required. The stress analysis is reduced to only one calculation on the core pipe
- Easy to install and easy to modify in case of revisions or changes on site
- The TE system can offer a redundant system, allowing an easy periodical maintenance of the steam traps

Compared with Tube Tracing

- An engineering product performance guaranteed: the TE system is based on thermal analyses
- Less expensive (CAPEX) because TE elements are paneled having fewer steam traps needed
- Less supplies and returns results in less steam traps and in less overall maintenance cost (OPEX)



EUROPOORT

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