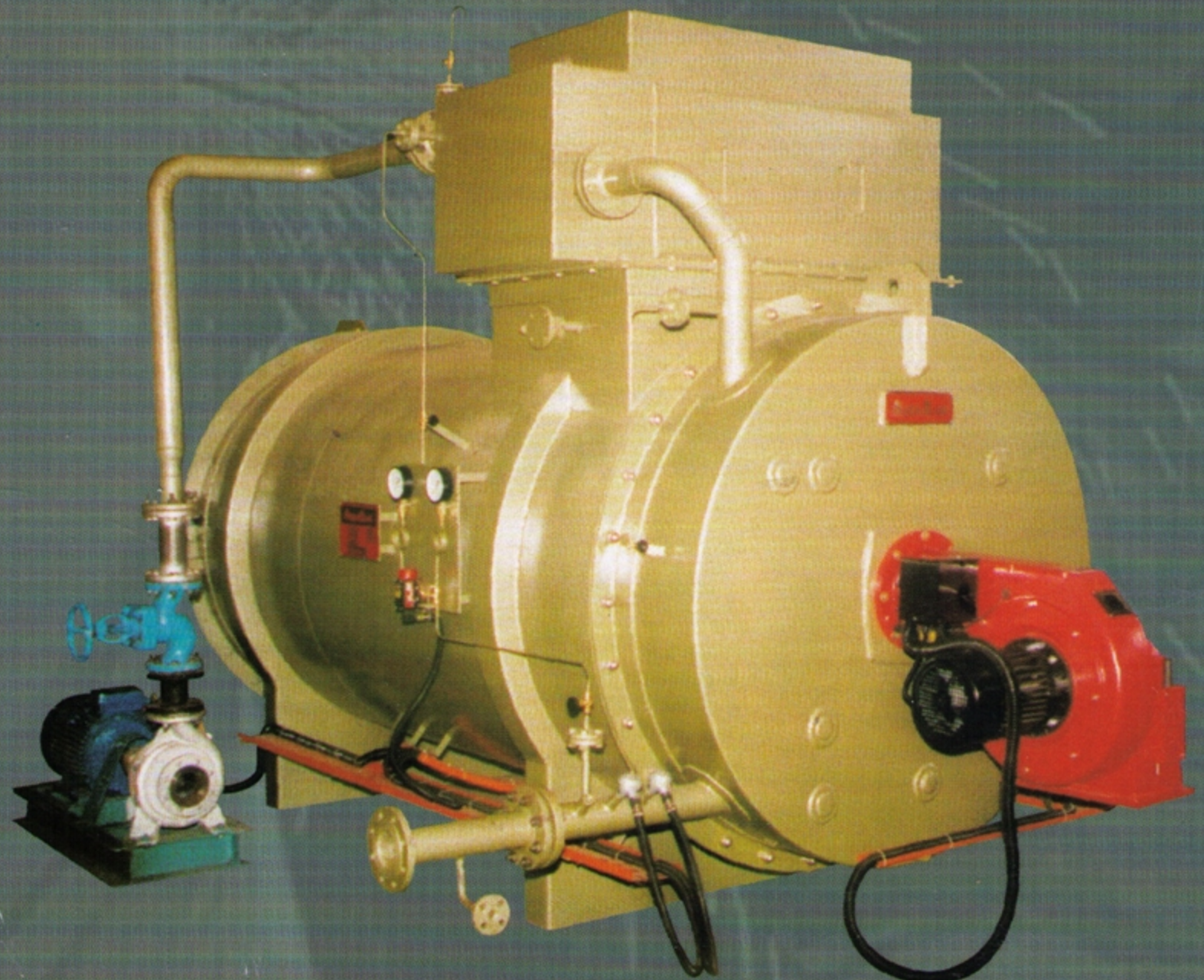


THERMAL FLUID HEATER



Maximum working temperature is 300°C.
Designed and manufactured to latest
ASME Code Specifications.

Standard Heat output:
• 0.8 - 12 MBtu/hr



TITAN MTH



MECHMAR BOILERS SDN BHD a wholly owned subsidiary of **MECHMAR CORPORATION (M) BERHAD**, the market leader in Malaysia for boiler manufacturing achieved yet another distinction with the award of ISO 9002 certification by Lloyd's Register of Quality Assurance making it the first boiler manufacturing company in Malaysia to attain this recognition.

With Lloyd's Class I certification for its product and ISO 9002 certification for its quality management system, **MECHMAR BOILERS SDN BHD** is now among the elite group of boiler manufacturing company in the world. For its high quality workmanship and consistency in quality, **MECHMAR BOILERS SDN BHD** is already a holder of CLASS I fabricator licence for pressure vessel manufacturing from Lloyd's Register of Shipping since 1985.

MECHMAR BOILERS SDN BHD started operation at Lot 14, Jalan Timah, Pasir Gudang Industrial Estate, Johore in 1977 and to date have produced more than 3000 units of boilers ranging from 500 lb to above 132,000 lb capacity of steam per hour. It also manufactures Hot Water Boilers, Thermal Fluid Heaters and other pressure vessel.

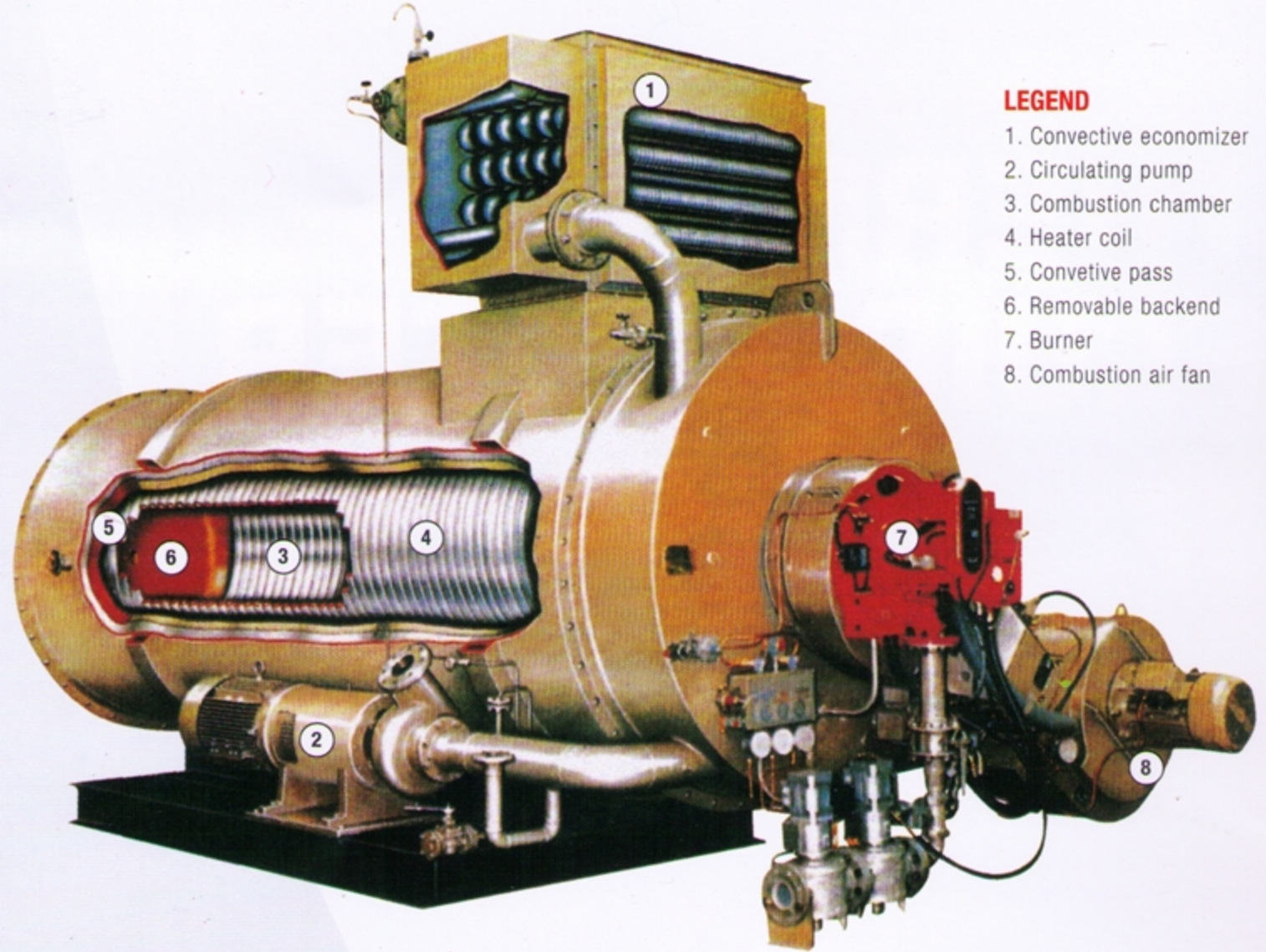
The products are developed and marketed by **MECHMAR COCHRAN BOILERS (M) SDN BHD**, another wholly owned subsidiary of **MECHMAR CORPORATION (M) BHD**.

MECHMAR COCHRAN BOILERS (M) SDN BHD markets a wide range of boilers, thermal oil heaters, steam plant and power plant installation. It operate from offices and service centres in Shah Alam, Johore and Prai to ensure excellent after sales service and prompt supply of spares.



TITAN MTH

Thermal Fluid Heater



LEGEND

1. Convective economizer
2. Circulating pump
3. Combustion chamber
4. Heater coil
5. Convective pass
6. Removable backend
7. Burner
8. Combustion air fan

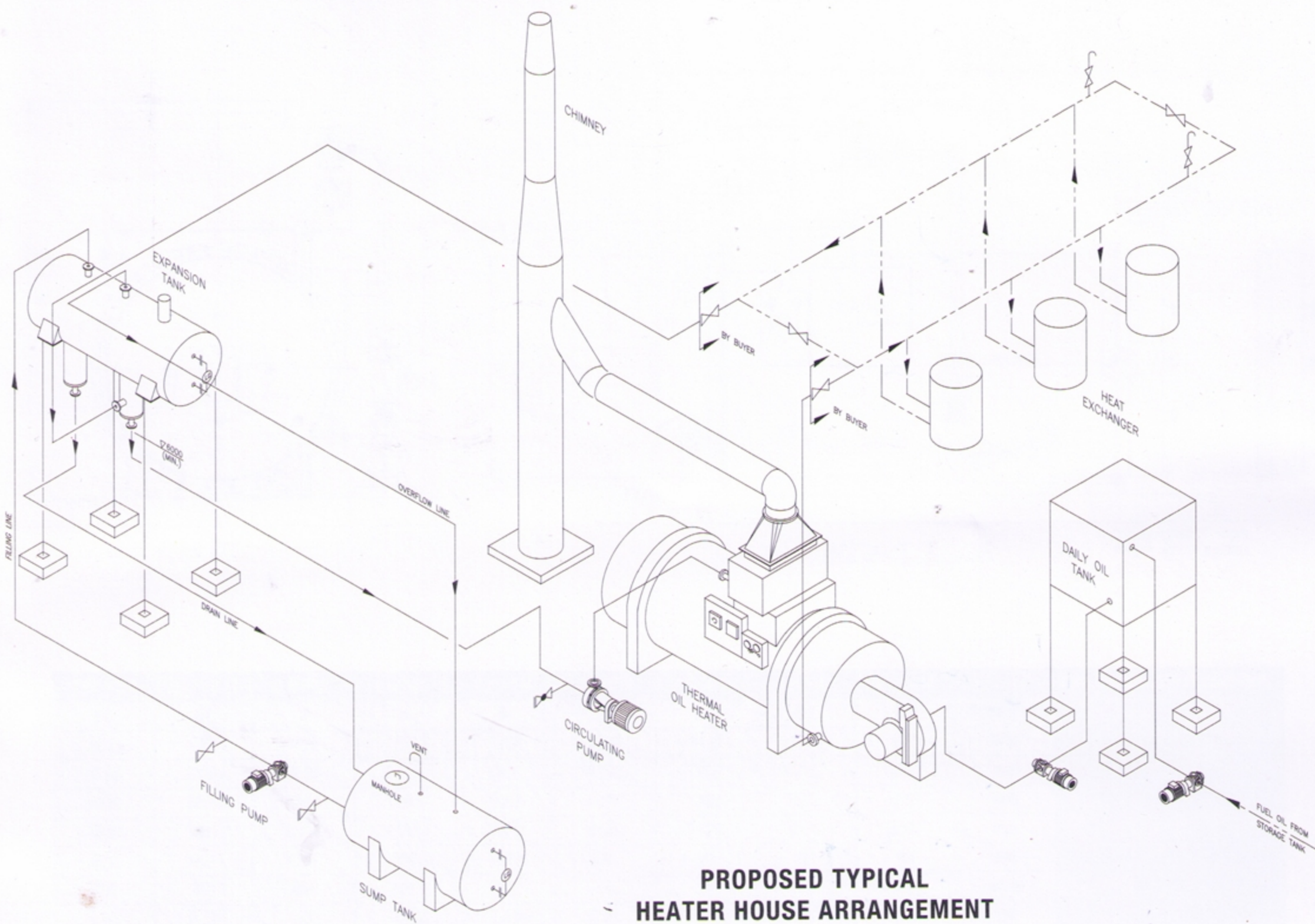
For process heating over a wide range of temperatures, mineral oil or synthetic hydrocarbon thermal fluids are widely used by many industries in preference to steam, high pressure hot water or other direct heating methods. The use of a low pressure thermal fluid heating system has the following advantages:-

- | | |
|--------------------------------------|----------------------------------|
| (1) High temperature (up to 300°C) | (5) No freezing |
| (2) Low pressure | (6) No danger in hazardous areas |
| (3) No corrosion and scale formation | (7) Reduced system losses |
| (4) No water treatment | (8) Low running costs |

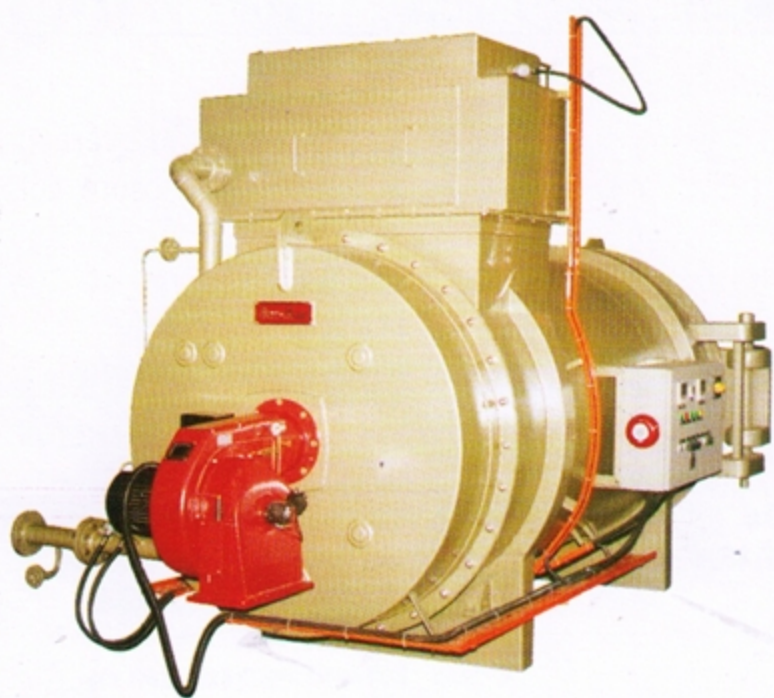
High flexibility of process temperatures to multiple user processes can be achieved from a single heating system with automatic control. The system can show up to a 30% improvement in overall thermal efficiency with many operational and maintenance advantages. The high fluid temperature which can be set at 300°C provides benefits in increased production and lower capital costs when compared with other heating systems.

CONTROL CABINET

The cabinet houses the thermostatic temperature controller, high temperature cut-out, motor contactors, burner controller and safety interlocks. The standard temperature controller has separate adjustable set points to control the burner high/low and on/off operation automatically. Continuous monitoring of the pressure difference across the heater ensures that the correct thermal fluid flow rate is maintained. Any malfunction in the heater operation gives fail safe shut-down with visual indication.



PROPOSED TYPICAL HEATER HOUSE ARRANGEMENT



HEAT ABSORBER

The combustion chamber consists of a horizontal close wound coil formed from seamless pipe through which the thermal fluid is circulated. The burner fires into the chamber and radiant heat is recovered via the inside surface to the coil. Convective heat is recovered from the combustion gasses as they pass over the outside surface to the coil through the annular space between the coil and the internally insulated heater casing. The gasses are exhausted to atmosphere through a side mounted stack connection.

TYPICAL APPLICATIONS

The following industries use thermal fluid heating extensively:

- | | |
|---------------------------------|--|
| Chemical | - reactors and reboilers |
| Textile | - stenders and printers |
| Plastics and Rubber | - presses, calenders and extruders |
| Food | - cookers, deodorizers and spray driers |
| Construction | - roadstone coating, autoclaves for accelerated concrete curing and silica/lime brick making |
| Laundry | - washers, tumblers, ironers and presses |
| Storage and Distribution | - heating tank farms, marine cargo and road tanker residues |
| Wood | - platten presses and drying kilns. |