HOT OIL UNIT

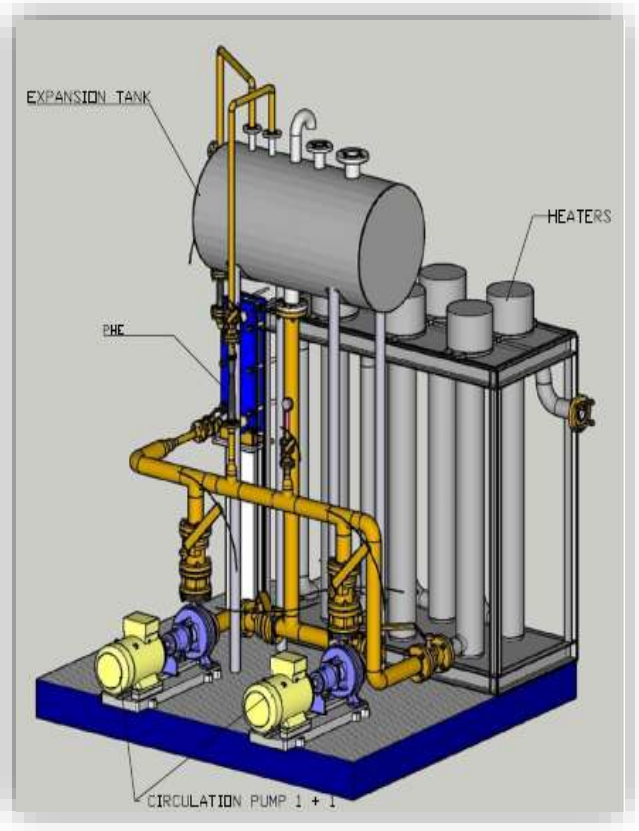
A Hot Oil Unit (HOU) is a closed-loop heating system that uses a thermal fluid (hot oil) instead of steam or direct fire to transfer heat to a process. The heat transfer oil is heated in a heater (usually by electric elements or a fired heater) and circulated to process Common in applications requiring precise,uniform heating up to 300–400 °C without high pressure.

APPLICATIONS

- Jacket heating for polymerization, resin production
- Fryers, oil heating, deodorizing
- Tank heating, bitumen processing.
- Dryers and calenders.
- Extruders, vulcanizing process.
- Process heating for reactors and distillation

ELEMENTS

- ✓ Thermal Oil Heater which is fired or electric type.
- ✓ Circulation Pump which is maintains oil flow through the loop.
- ✓ Expansion tank accommodates oil expansion due to heating.
- ✓ Process Heat Jackets is used where the heat is transferred to the process.
- ✓ Control panel for temperature and flow control, alarms, and safety interlocks.
- ✓ Piping & valves for circulation and isolation.
- ✓ Strainers is used to remove contaminants from oil.
- ✓ Safety devices like Pressure relief valve, temperature limiters, low-flow alarms is used in Hot oil unit.



TECHNICAL PARAMETERSss

Parameter	Typical Range
Heating Medium	Synthetic thermal oil or mineral-based heat transfer oil
Operating Pressure	Usually < 5 bar (low pressure)
MOC	Stainless Steel, Mild steel
Heat Source	Gas, diesel, electricity, biomass
Efficiency	85–92% (fired heater)