HEATEC

PUMP SKIDS

WE MAKE PUMP SKIDS FOR A WIDE variety of thermal fluid heaters and process systems. They are usually made as separate, detachable units so they can be placed adjacent to the heater or in available space nearby.

The typical pump skid consists of pumps, valves, strainers, filters, gauges, piping, controls, and status lights. They are installed on a structural steel skid, pre-piped, prewired and pre-tested for faster, easier field installation.

Typically, the skids are used in applications where the system is in continuous operation and cannot be shut down for maintenance. Thus, the skid incorporates backup pumps, which can be switched on if it becomes necessary to shut down the main pumps for any reason.

Detachable pump skid for thermal fluid heater has a single pump and expansion tank

Detachable pump skid for thermal fluid heater has a second pump that serves as a backup

Pumps

Air-cooled centrifugal pumps are used in systems where the thermal fluid operates at temperatures up to 660 degrees F. Water-cooled centrifugal pumps are used where the thermal fluid operates at temperatures up to 750 degrees F.

Piping on the inlet and outlet sides of the pumps is connected to each pump with flexible hoses made of a bellows covered with braided, stainless steel mesh. These eliminate stresses on the pumps from thermal expansion. Moreover, the piping is independently supported to keep weight off the pumps.

Filters

The pumps are protected from debris by strainers and side-stream filters. All of the return thermal fluid passes through the strainer, which has a wire mesh that catches larger debris with minimal restriction to flow. The mesh can be removed and cleaned. The strainer has a drain valve for use when servicing the strainer.

The thermal fluid also passes through the side stream filter, which has a replaceable filter cartridge that catches finer debris. However, this type of filter has a very fine mesh that restricts flow somewhat. Accordingly, only a portion of the return mainstream is diverted through it to avoid excessive back-pressure.

Pressure gauges

Each pump has two pressure gauges so that proper operation can be verified. One is in its inlet to indicate suction (30 inches vacuum to 160 psi). The other is in the outlet to indicate discharge pressure (0 to 160 psi).

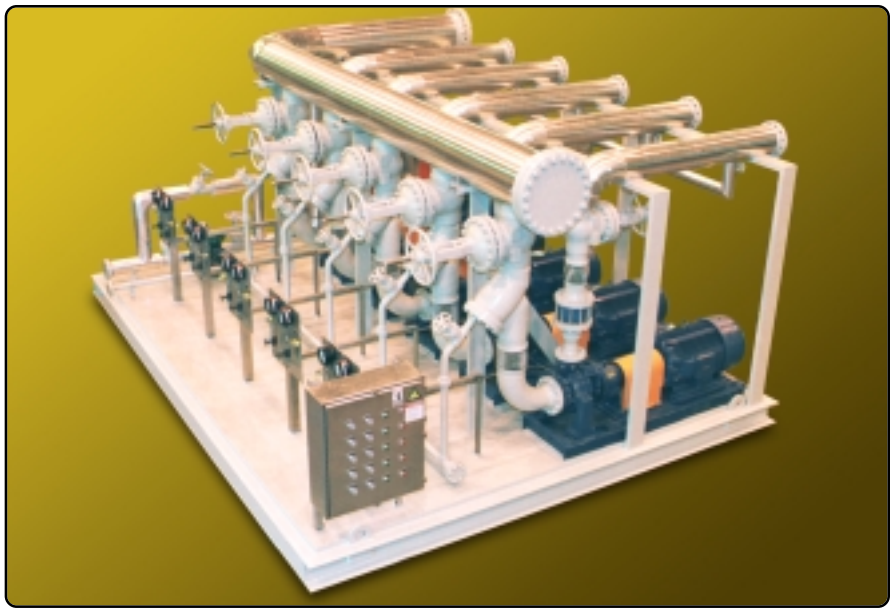
Control valves and check valves

Each pump has two shutoff valves that allow it to be isolated from the system when it is shutdown. One is in the inlet line. The other is in the outlet line. It also has a check valve in its outlet line to prevent back flow through the pump when it is not operating.

Controls

Pump skids may have an electrical panel with centralized controls. Panels for outdoor use are built to NEMA 4 code to protect against windblown dust and rain, splashing water and hose-directed water. They are available in either stainless steel or painted steel.

The panels typically include pump selector switches, motor status lights, and motor starters.



Pump skid with five pumps. One is used as a backup for any of the other four.

Piping

All piping on the skid is built to ASME and ANSI code when specified. Insulation is highly recommended to minimize heat loss. Insulation ranges from 1 to 3 inches of fiberglass, depending upon the operating temperature of the thermal fluid. The insulation is covered with either an aluminum or stainless steel jacket.

Pre-testing

Each pump skid is pre-tested to make easier installation at the job site. Pre-testing includes hydro-testing the piping to ensure that there are no leaks. It includes continuity checks of the electrical controls to ensure that wiring is according to schematics.

Options

A wide range of options are available. Pump skids may be integral with the heater. Or they can be separate, stand-alone units. They may include other components such as expansion tanks. Popular options include: Drip rim. Seal welding to eliminate crevices. Sandblasting and special finish painting. Bellows seal valves. Canned motor pumps. In-line pumps. Mag-drive pumps. Heat exchangers. Customer-preferred namebrand components. By-pass valves. Flow-control valves.

Experience

We have built thousands of pump skids since we started business in 1978. Many are integral with heaters we build. However, we build most stand-alone units to customer specifications.

We can design your pump skid from scratch. Our long experience enables us to anticipate needs and avoid problems easily overlooked by those with lesser experience.

Customer satisfaction

Our success is built on knowing what our customers expect and fully meeting those expectations. Customer satisfaction is our number one priority.

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