

## ENGINEERING DATA SHEET

<i>Process Fluid Temperature Control</i>		
<b>Date</b>	<b>Supersedes</b>	<b>No.</b>
<b>03/26/99</b>	<b>03/07/68</b>	<b>24E</b>

When process fluid must be maintained at a specific temperature in the process, it may be necessary to provide a method to control the temperature inside the pump and motor. This is usually necessary when the process fluid will solidify or become vicious at ambient temperature. When pumping these types of liquids, Chempump recommends that the pump be modified for internal circulation and a temperature sensor be installed on the pump. Suggested methods to maintain pump temperature are:

- A. Heated and Insulated Cover
- B. Removable Cast Steam Jackets
- C. Insulating Blankets
- D. Welded Jackets

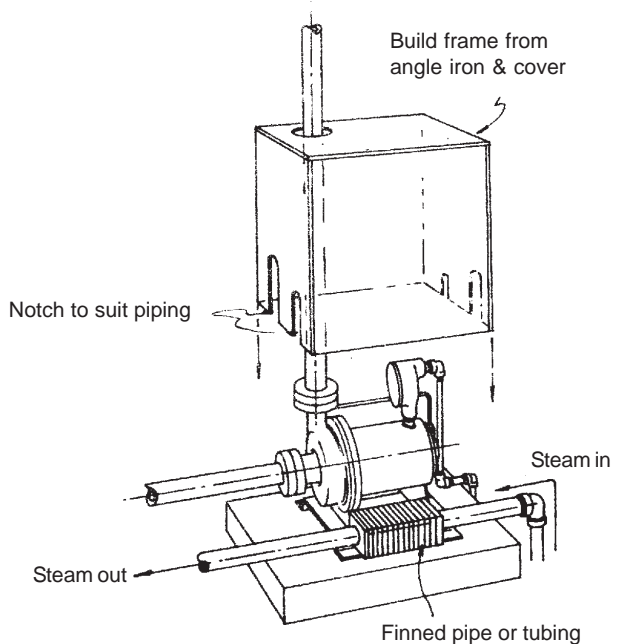
### A. Heated and Insulated Cover

A suggested method of maintaining constant temperature around a pump by using a finned-type heater, or a strip heater, and a housing covering both pump and heater is illustrated above.

Chempumps are frequently used to handle fluids that solidify at relatively high temperatures.

The method illustrated here provides two benefits.

1. Uniform heating at required temperature; no part of the pump is exposed to the atmosphere.
2. Simplified bearing inspection; no insulation to remove and replace.



## B. Removable Cast Steam Jackets

Cast steam jackets are fitted to the pump casing and stator assembly of the pump. They are removable and can be installed on a warehouse spare pump or back pull out assembly. These jackets are made to order for each liquid end and motor size.

## C. Insulating Blankets

Another method is the use of heat tracing (electric or heat transfer medium) in conjunction with removable insulating blankets. These blankets are made to order for each size pump based on the outer dimensions of the pumps and motors.

Insulating blankets are easily installed and removed when necessary without damage or destroying any fasteners.

## D. Welded Jackets

Jackets welded to the stator band are available for use as steam jackets and for liquid mediums at higher temperatures and pressures. Normally, welded type jackets are suitable for steam pressures to 50 psi and liquid medium pressures at 100 psi. Welded type jackets specially fabricated for higher pressures are also available.

Welded jackets are also available for the pump assembly as well as the motor section. (See EDS 15E.)