



Operation Manual

Pump Monitoring by

Temperature Probe PT 100

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1. General

The surface temperature of the isolation shell can be monitored by means of a resistance thermometer PT 100. The following malfunctions can thus be detected:

- Operation against closed gate valve on the discharge side
- Operation against closed gate valve on the suction side
- Dry-running due to failure of having the pump filled before start-up
- Evaporation of the flush flow fluid
- Blocking of flow ports

2. Connection

The PT 100 is screwed into the connection provided for that purpose in the flange of the intermediate lantern (fig. 1, part no. 620.1). During installation of the PT 100 make sure that the pivot of the probe rests against the isolation shell.

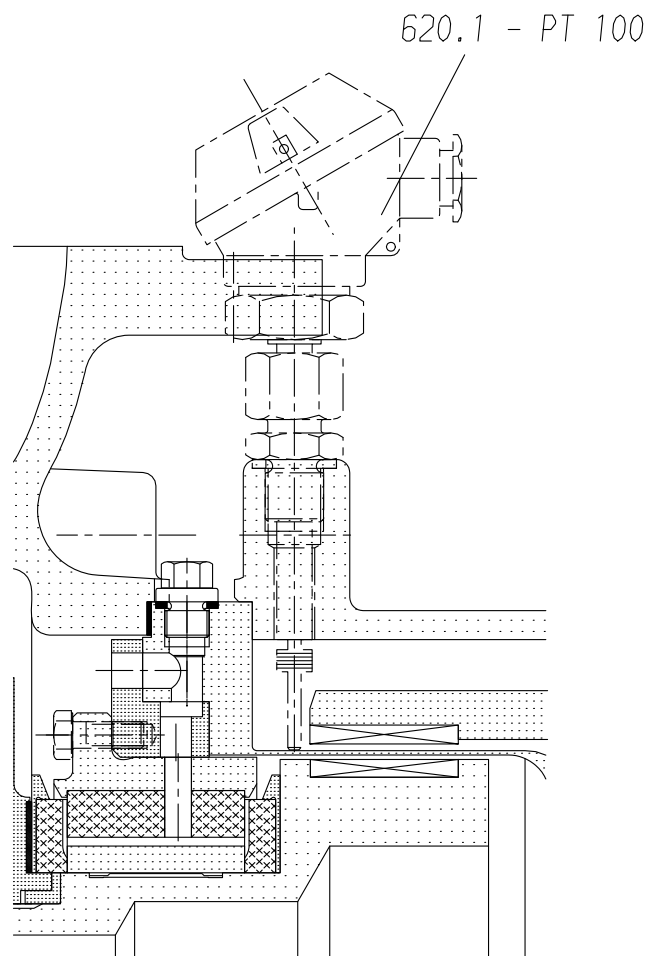


Fig. 1: Pump monitoring by installation of a PT 100 on the isolation shell

When connecting the PT 100 to a measuring transducer make sure the operation instructions of the pertaining transducer are observed.

The measuring signal of the PT 100 can be processed by means of various monitoring installations (temperature controller, relay, etc.). When connecting the PT 100 measuring transducer to the monitoring unit used in the installation, please observe the operation instructions pertaining to said monitoring unit.

When the PT 100 is used in hazardous areas, appropriate measures are to be taken (use of approved components, Zener barriers, etc.).

3. Disabling Points

The temperature prevailing on the isolation shell surface during normal operation and being measured by the temperature probe PT 100 essentially depends on the following factors:

- Working temperature of the pump
- Ambient temperature
- Installation conditions (outdoor or indoor installation)

Therefore, the temperature measured by the PT 100 will change with varying ambient or operation conditions although the pump is undamaged and operated as prescribed.

When the aforementioned conditions are stable, it may be assumed in case of a temperature rise of more than 5 °C that the pump is not operated as prescribed or has been damaged. The disabling point should be set to a temperature 5 °C to 10 °C higher than the temperature measured during normal trouble-free operation under steady conditions.