MONITORING PUMPS

For critical and environmentally sensitive pumping applications, magnetically coupled, "sealless" or "closed" pumps offer a number of clear advantages. But, since the bearings are now inside these pumps, a presence of fluid is needed to remove the heat buildup. Since repair or replacement of one of these nice pumps will require a deep reach into the wallet, an effective monitoring system becomes a good investment.

POWER MONITORING

MONITORING PUMP HORSEPOWER TELLS YOU WHAT'S HAPPENING TO THE FLUID

![Power Monitoring Diagram]

The curve shows the power changes on a centrifugal pump as the outlet valve is closed and opened and the drop in power when there is no liquid.

LOW POWER:
- Dry Running
- No Prime
- Plugged or closed inlet
- Cavitation

HIGH POWER:
- Jammed impeller
- Bad Bearings

WHY MONITOR POWER INSTEAD OF JUST AMPS?

![Power vs. Amps Diagram]

Power is Linear Equal Sensitivity at Both Low and High Loads

Amps

No Load Full Load

No Load Full Load

PUMP LOAD CONTROL

The PMP-25 compact digital Load Control is designed specifically for pump monitoring. It measures true power and has a digital load display that shows percent of load, horsepower or kilowatts. It can be mounted on a door or raceway, in a panel or on a wall.

The low trip point and high trip point give you protection at both ends and there is a Form C Relay for each set point. Nonsensical trip can be filtered out with the Trip Delay and Start-up timers.

The 4-20 milliamp analog output can send load information to data collection systems, remote load meters, programmable controllers and chart recorders.

UNIQUE SENSOR

Power sensing is done by monitoring the voltage between two of the phases and current in the remaining phase (see page 2). For the Pump Load Control we use the "Range Finder Toroid" for the current sample. It has six flip switches that let you select capacities from small motors up to 50 horsepower with this single sensor. This simplifies installation and set up. Above 50HP, you can use an external current transformer together with the Range Finder Toroid.

Pump Load Controls - Protection for Pumps

Monitor True Motor Power

- Detects Loss of Load
- Detects Overloads
- Dry Running
- No Prime
- Cavitation

PMP-25 - Compact Digital Pump Load Control

NEW! Model AMP 420A - Loop Powered Current Transducer

- Ideal for small or big motors - convenient 4-20 milliamp analog output

NEW! Compact Motor Power Sensor

Model TP-2

- Ideal for Small Motor Starter Enclosures