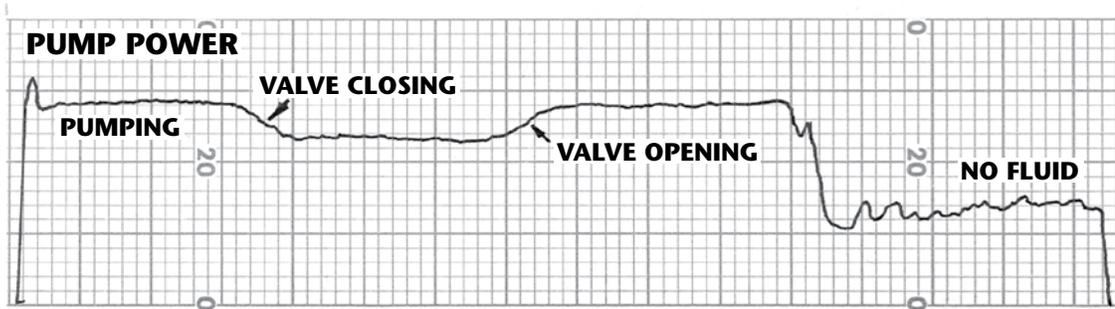


# MONITORING PUMPS

For critical and environmentally sensitive pumping applications, magnetically coupled, “sealless” or “canned” 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



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.

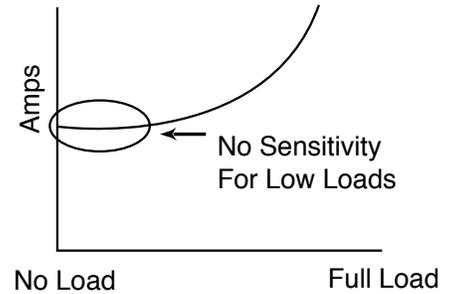
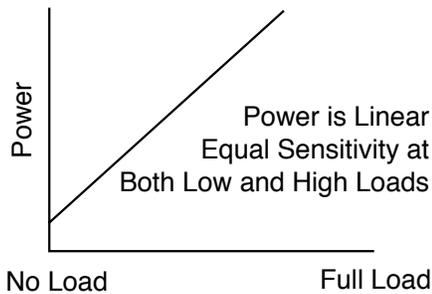
#### LOW POWER

- Dry Running
- No Prime
- Plugged or closed inlet
- Cavitation

#### HIGH POWER

- Jammed impeller
- Bad Bearings

### WHY MONITOR POWER INSTEAD OF JUST AMPS?



### 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. Nuisance trips 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 dip 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 Betrig Finder Toroid.

