Power plant applications
Power plant applications

- Baltimore Gas and Electric company’s Brandon Shores electric power plant
  - Two 680 MW coal-fired units
Main turbine

- Most steam turbines employ proximity probe systems for machine diagnostics and protection

General Electric 680MW turbine
Monitoring system for main turbines and pumps

- Most steam turbines employ proximity probe systems for machine diagnostics and protection

Diagnostic system and alarms

Proximity probes on outboard bearing
Cooling towers – 2 types

Please note that this type of cooling tower does not have fans.
View from bottom of cooling tower

- Environment is outdoor, ambient temperature with direct water spray
Gearbox and fan blades in top of cooling tower

- Gearbox is inaccessible and critical
  - Common application for permanently mounted transducers
- 4m blades turn at 135 RPM driven by 150 kW motor
Induced drift fan

- Monitoring vibration on outboard motor bearing
- 4460 kW motor at 600 RPM
- Fan is critical to unit operation
Coal pulverizer gearbox and motor

- 660 kW motor turning at 860 RPM
- Pulverizer is expensive to repair
Taking data on pulverizer gearbox bearing

793 Sensor

Vibration “Expert”
Codensate pumps

- Line of vertical pumps which are critical to plant
- 7,458 kW motors turning at 1800 RPM
Taking data on vertical pumps

Robby Herman, plant technician, obtaining data on motor bearing
Fresh water cooling system pumps

150 kW motor at 1180 RPM
Pump taking data on cooling system pump

793 sensor on inboard motor bearing
Wilcoxon Sensing Technologies

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