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Power plant applications

16 May 2012

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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

Power plant application Baltimore Power and Electric

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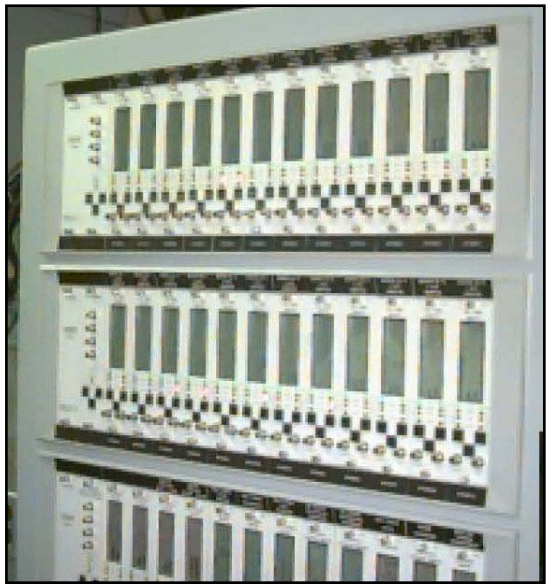
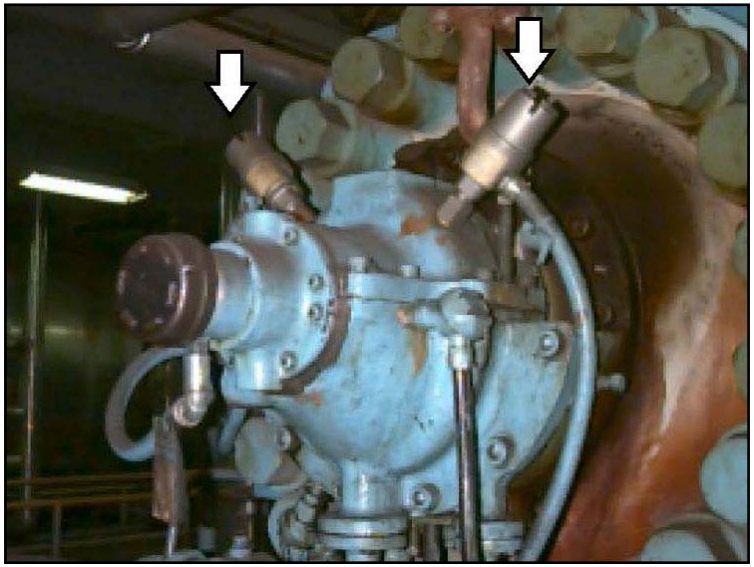
Monitoring system for main turbines and pumps

- 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.

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Induced drift fan

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

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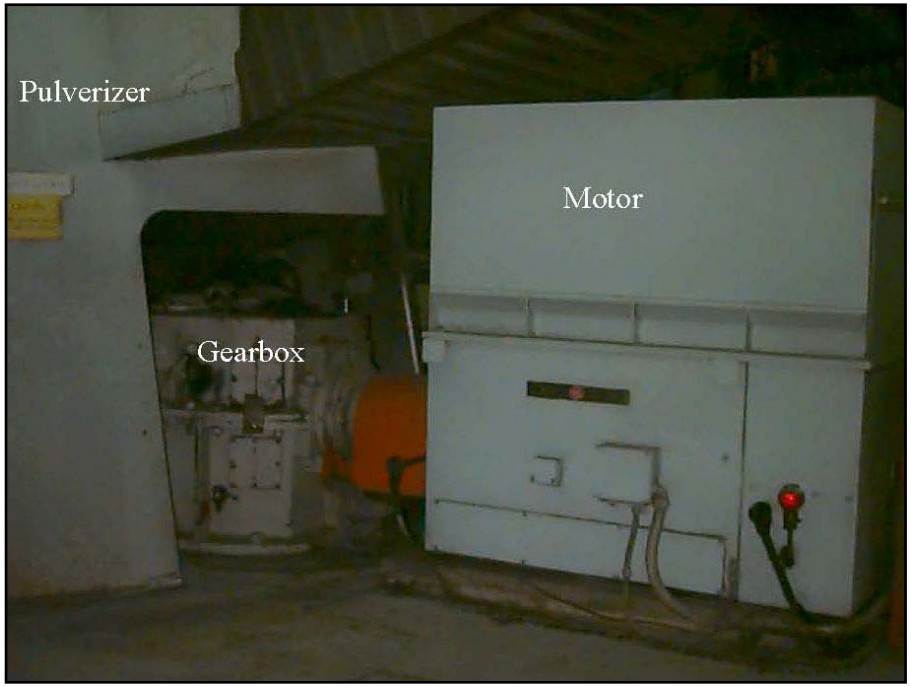
Coal pulverizer gearbox and motor

- 660 kW motor turning at 890 RPM
- Pulverizer is expensive to repair



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Taking data on pulverizer gearbox bearing

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Condensate pumps

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

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Taking data on vertical pumps

Robby Herman, plant technician, obtaining data on motor bearing

Fresh water cooling system pump

150 kW motor at 1180 RPM

Pump taking data on cooling system pump

793 sensor on inboard motor bearing

Thank you