



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

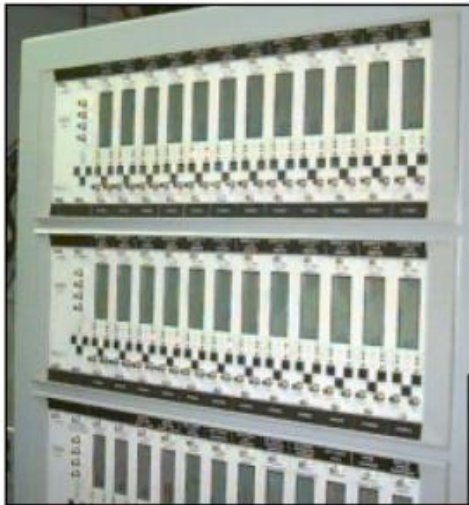
- Most steam turbines employ proximity probe systems for machine diagnostics and protection



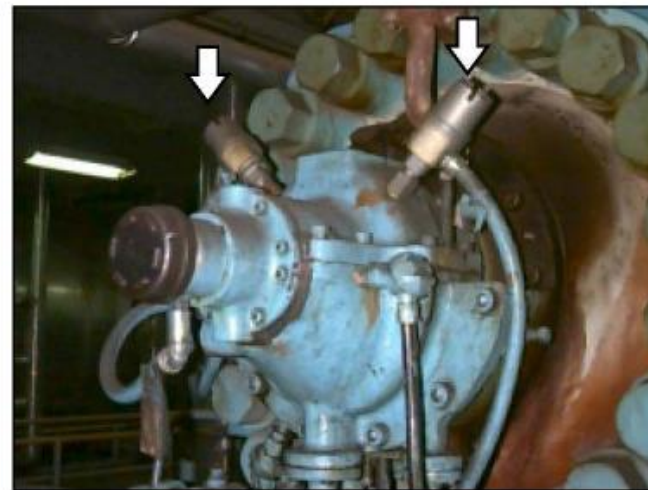
General Electric 680MW turbine

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



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

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