

POWER OPTIMIZATION CENTER



Luminant

ANOTHER SUCCESS STORY MILL PINION HIGH BEARING TEMPERATURE

24/7 Real-Time Operational Support With *Actionable Intelligence*

CONTENT

THE PROBLEM 6

THE SOLUTION 7

THE SAVINGS 7



SOLUTIONS & SAVINGS

“Quick action by the Power Optimization Center saved this generation facility \$34,693 in total cost avoidance”

OUR MISSION:

The Power Optimization Center is dedicated to providing unsurpassed, advanced monitoring and diagnostics services to generation and production facilities. Industry-seasoned engineers and experienced process control operators excel in identifying incipient and long-term equipment issues around the clock, providing actionable intelligence directly to those responsible for real-time operations. With no ties to parts or maintenance organizations, the success of the Power Optimization Center is driven by the competitive market advantage its clients achieve through realizing maximum asset performance.



PULVERIZER MILL PINION HIGH BEARING TEMPERATURE

The Luminant Power Optimization Center identifies, forecasts and advises plant personnel of emergent issues impacting production through the integration of remote monitoring, modeling and diagnostics. In the current market environment of low natural gas and wholesale power prices and tightening emissions standards, generators need to produce megawatts as profitably as possible. The Power Optimization Center can help reach that goal.

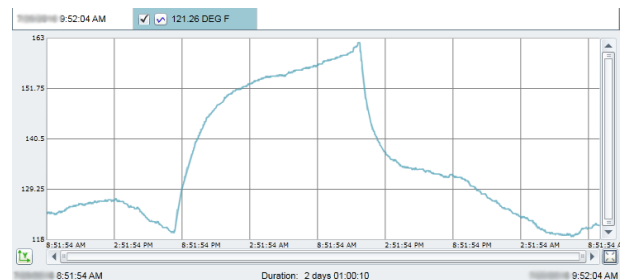
In particular, Power Optimization Center personnel discovered rapidly rising bearing temperature on a pulverizer mill outboard bearing. **Quick action by the Power Optimization Center saved this generation facility \$34,693 in total cost avoidance.**

The Problem

On a hot summer day, the Power Optimization Center received a pulverizer mill outboard bearing high-temperature alarm on the main alarming system. The pulverizer mill crushes coal into a fine powder, allowing for rapid and complete combustion inside the boiler furnace. The mill pinion bearings are essential to mill operation, transferring rotational energy from the mill motor to the mill itself. Large steel balls move loosely inside this style of pulverizer housing, crushing the coal and allowing air from the primary air fans to carry fine coal dust from the pulverizer into the furnace.

Power Optimization Center operators completed a swift investigation, comparing bearing temperatures for the alarming pulverizer mill to historical values, and they determined that the rising temperatures were not normal and needed immediate attention.

Power Optimization Center procedures state that plant control rooms should be contacted directly when emergency situations arise, minimizing the time between emergency and remedy. This allows for proper plant personnel to assess the situation and follow their procedures without delay, minimizing risk and maximizing response time.

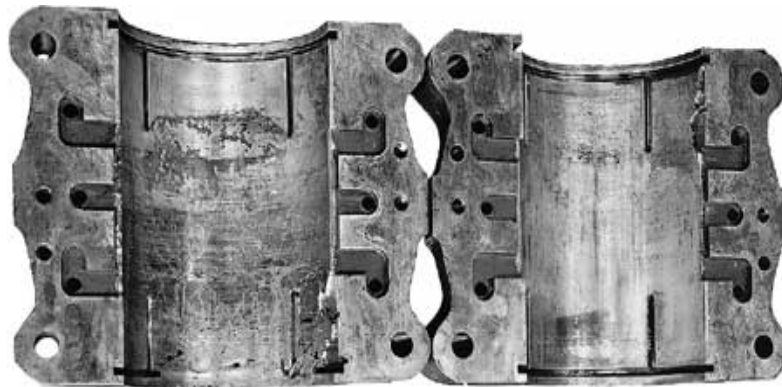


The Solution

The Power Optimization Center contacted the plant and apprised operations of the rapidly rising bearing temperature. Upon further investigation, they determined the pulverizer mill had been recently started and the plant duty shift supervisor found the auxiliary cooling fan breaker tripped. The auxiliary cooling fan indirectly cools the pulverizer mill bearings. If the pulverizer mill bearing became overheated, it would have experienced permanent damage, possibly causing extensive damage to the pulverizer mill itself, resulting in lost generation revenue and maintenance costs for repairs. The plant duty shift supervisor reset the auxiliary cooling fan breaker, which reset the cooling fans, and all pulverizer mill bearing temperatures returned to normal.

The Savings

The Power Optimization Center determines cost avoidance by applying proprietary calculations. This generating facility avoided \$9,963 in lost revenue and \$24,730 in maintenance costs, including parts and labor, totaling \$34,693 in total cost avoidance.



Typical Wiped Journal Bearing

Utilizing over a dozen separate software systems that monitor and diagnose just about any issue that may affect plant operations, the Power Optimization Center has a proven history of helping manufacturing and generating facilities realize maximum asset performance.

With power markets nationwide under low price pressures, generators more than ever need a way to analyze unit performance in real time to enhance efficiency, prevent shutdowns and save dollars. Whether your equipment resides in the utility industry, manufacturing or any other type of facility, the Power Optimization Center is ready to help your company achieve the highest levels of safety and reliability.

Call us today to see how we can bring value to your company and visit www.pocdiagnostics.net to learn more.

POWER OPTIMIZATION CENTER



CONTACT US TODAY TO SEE HOW WE CAN HELP YOU

POWER OPTIMIZATION CENTER

1601 Bryan St.

Energy Plaza

Dallas, TX 75201

Phone: 214.875.8130

POCInfo@luminant.com