

Airheater Service & Inspection Solution

Inspection Report Outline

The technical systems addressed during a Paragon Inspection are as follows:

Airheater Rotor

- Rotor/Diaphragms/ Shell Weldments
- Rotor Drive Unit
- Pin Rack and Supports
- Pinion Gear
- Basket Support Grating
- Basketed Element
- Seals (Radial, Circ/Bypass, Rotor Post, Axial, Static)

Airheater Housing

- Sealing Surface/ Sector Plate: Physical Condition and Alignment
- Bearings: Visual Inspection, Oil Samples
- Trunnion Seals

Ancillary Equipment

- Soot Blowers: Distance from the Element, Linkage, Nozzle Condition
- Pressurized Bearing Oil System and Auxiliary Oil Cooler



Bypass Seal Gap



Expansion Joint Erosion Damage



Basket Erosion



Sector Plate Erosion

Post Inspection Debrief

The written inspection report is delivered to the customer within the agreed upon time period and after peer review within the technical service department. The report is accompanied by an in-depth debriefing between the Paragon Inspector and involved plant personnel. A prioritized list of recommendations as well as photographic documentation is reviewed and discussed with the customer.



Debriefing

Paragon Experience

Paragon's Technical Service Group has completed inspections in over 150 airheaters for leading utilities, refineries and industrial facilities. Paragon specializes exclusively in rotary regenerative airheaters. This specialization combined with extensive field experience enables our technicians to evaluate, identify and address a broad range of issues. In today's business and regulatory environment our customers are seeking to improve efficiency, performance and/or ensure that their equipment is operating effectively. Many customers have airheaters that have been in service over 25 years. These customers are utilizing Paragon's Technical Service Group to assist them in reconditioning their airheaters to increase service life.

Paragon offers full services on airheaters including the installation and supervisions of high-performance products. When installing high-performance products, it is recommended that the installation be either supervised or accomplished by Paragon trained personnel. Proper installation of the high performance product line requires just the right degree of setting essential to maintaining positive sealing contact between the seal and the sealing surface. Improper installation can dramatically reduce the increased efficiency and performance normally associated with high performance products.



Basket Installation



Bypass Seal Installation

Airheater Service & Inspection Solution

Overview

Paragon's Airheater Inspection Service is designed to provide the customer with a detailed analysis of the current operating condition of their airheater. Many airheaters have been ignored for numerous years and often plants are unaware of the current condition of their rotors. Paragon's technical staff focuses its inspections of those critical systems that effect reliability and performance of the unit. The inspection report includes a detailed discussion of each system within the airheater and includes photographic documentation to assist the plant in identifying which critical issues need to be addressed during the upcoming outage.

Why Inspect Your Airheater

Identify Critical Repairs and Maintenance

- Discover unwarranted operating costs associated with current equipment conditions.
- Identify problem areas pre-outage so they can be repaired during normal outage cycles. This would decrease maintenance costs, capital costs and forced outage rates.

Performance Improvements

- Identify areas where high performance upgrades may improve the productivity of the unit.
- Identify solutions to leakage; corrosion or SCR related issues that are affecting the reliability and efficiency of the unit.
- Lack of awareness regarding equipment condition can force a utility to compete at a reduced efficiency level. In the competitive work of electric generation, this is an unacceptable risk.



Spool Erosion



Broken Pin Rack



Diaphragm Stay Plate Cracking

Before The Inspection

Paragon's technical staff will contact the plant personnel before and during the inspections, this allows the technician to narrow in on any chronic problems that the plant may have trouble remediating. Additionally, modifications that have been made in the unit are discussed along with what side effects that may accompany those changes.

Paragon Airheater Inspection

The Airheater Inspection is performed by Paragon's technical staff who are trained to identify critical areas of the airheater. Corrosion, erosion, wear or age may be causing a decrease in the efficiency and performance of the unit. Our technical staff will evaluate, photograph, educate and provide detailed reporting on areas where repair, replacement or additional maintenance is needed. These recommendations will lead to a defined range of improvement in both the efficiency and performance of the unit.



Paragon Inspection