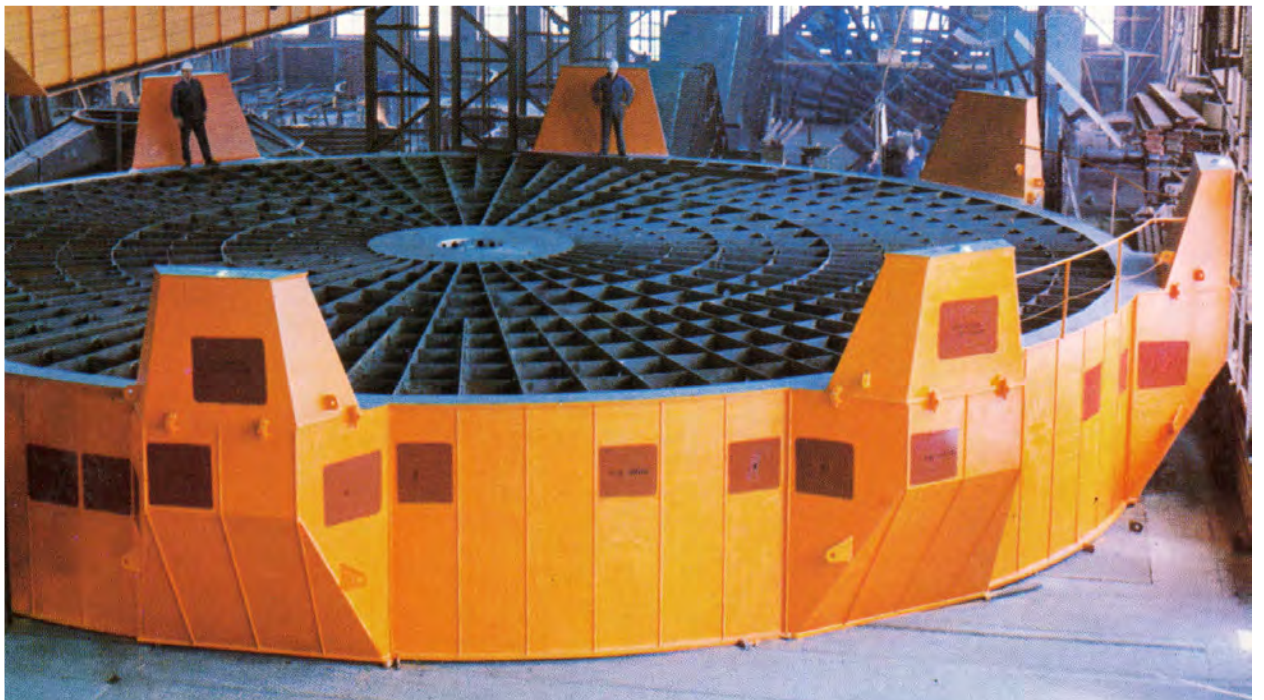


air preheater upgrades
for improved power plant efficiency



SPX Heat Transfer LLC provides engineering, manufacturing and field services to evaluate, repair and upgrade air preheaters, including Rothemühle and Ljungström* regenerative heat exchangers and other rotor and stator type preheaters.

Why Preheater Upgrades Are Important

The Clean Power Plan proposed by the U.S. Environmental Protection Agency (EPA) calls for the power industry to reduce CO₂ and other greenhouse gas emissions by 30% from 2005 levels. Because the Air Preheater contributes about 10% of the boiler's thermal efficiency, improving the flue gas path and recovering more energy across the air preheater (APH) may be a cost effective way to achieve greater efficiency in existing coal-fired power plants.

Three problems that contribute to the deterioration of APH performance are corrosion of the heat exchange elements and baskets, plugging and seal leaks. Air leakage has the largest single effect on APH performance.

We focus on three areas to optimize flue gas flow:

Heating element basket replacement

- Cold, intermediate and hot layers
 - improved heat transfer surface geometries
 - high heat transmission
 - low flow resistance
- Headwall and full wrap
- Radial or circumferential (tangential)
- Enameled or non-enameled

Site-specific evaluation and leak detection

- Condition of sealing system, sector plates, sleeves, heating element baskets
- Levelness of stators and rotors
- Cleaning system operation and efficiency

Sealing systems – installation of high efficiency, adjustable non-contact seals

- Reduce seal wear and leakage
- Support operating efficiencies of downstream components, including filters and desulfurization units

Lack of consistent maintenance ultimately contributes to corrosion, fouling, ammonium bisulfate (HSO₄) plugging, increased auxiliary power consumption and higher pressure differentials that can limit combustion air fan operation.

Regardless of the age, condition, needs or OEM of your air preheaters and other thermal equipment and components, SPX Heat Transfer provides one reliable source for a wide range of aftermarket services, from emergency response teams and scheduled inspections and maintenance to complete air preheater modernization and replacement.

Emergency Remediation Services

- Responsive SPX field service engineers on-site to diagnose problems
- External visual and NDE inspections
- Thermal and mechanical assessments
- Repair and replacement of sealing system, sector plates, sleeves, heating element baskets and other components
- Turnkey removal and replacement

Maintenance and Repair Services

- Component inspection – recommended interval is 8-12 months before next planned outage:
 - Sealing system collar seals
 - Levelness of stators and rotors
 - Shaft position
 - Condition of sealing system, sector plates, sleeves, heating element baskets
- Sealing system adjustments
- Cleaning system efficiency evaluation
- Operating values assessment
- Replacement of heating element baskets

Proactive scheduled air preheater maintenance results in reduced downtime, fewer emergencies and unplanned outages and extends equipment and component life. Contact **Jonathan DaSilva**, SPX Heat Transfer Field Service Engineer at **918 688 5394** or email jonathan.dasilva@spxht.com to discuss how our air preheater field service team can be your product reliability partner.



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In the interest of technological progress, all products are subject to design and/or material change without notice.

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