COMPANY PROFILE

Our organization was started in the name of ‘GEETHA ENGINEERING COMPANY’ (GEECO), under the leadership of Mr. V. Rajagopal, in the year 1987 for manufacturing boiler components. Now, GEECO has specialized in supplying complete Air Preheater & Spares for any make & any size of Air Preheaters.

As the customers were growing, a private limited company was formed in the name of “GEECO Enercon Private Limited” in the year 1995, at Tiruchirapalli, Tamilnadu, India, a renowned place for making boilers and its components.

GEECO has been accredited with ISO 9001:2008 certificate by Bureau Veritas for “Design, Engineering, Manufacturing, Supply, Erection and Service Supervision of Air Preheaters”.

MANAGEMENT

Mr. V. Rajagopal, Managing Director

Mr. V. Rajagopal was working with BHEL in Air Preheater division from 1975 to 1987. Later on he was working as the Head of Air Preheater in ABB - Alstom, India. Now holding a Private Limited Company for ‘Design, Engineering, Manufacturing, Supply, Assessment and Expert Supervision for Rotary Air Preheaters. He has conducted seminars on Rotary Air Preheaters in India and abroad. Recipient of Award for “Outstanding Achievements in Business Excellence and Quality” from Indian Achievers Forum, New Delhi.

Mr. C. Gunasekaran, Director

Mr. C. Gunasekaran is holding a Engineering Industry since 1982 for Manufacturing Boiler Components with ‘Indian Boiler Regulation’ (IBR) Certification. Also Manufacturing components for cement and steel plants.
DESIGN & ENGINEERING

GEECO has full engineering setup for selecting the New Air Preheater to any size of the Boiler

GEECO has developed the software program for the selection, seal setting, performance and leakage of Air Preheaters. GEECO’s engineering excellence is reflected in the optimal solutions it provides to its customers. Our multi-disciplinary team of qualified and experienced engineers design highly reliable components that incorporate advanced technical know-how. The solutions are engineered to international standards to meet specific requirements and specifications of the customers.

Many design improvements, including heat transfer surface, sealing systems and cleaning equipment, are available for existing air preheater installations. To ensure the highest efficiency possible, GEECO researches all orders to ascertain whether any modification can be made that could increase operating performance.

MANUFACTURING & QUALITY

GEECO’s Manufacturing plant has the best of facilities for manufacturing all parts of the Rotary Air Preheaters. GEECO is having strong blend of Design, Manufacturing talents and capabilities. This enables us to handle simple fabrication to complex assemblies with ease.

GEECO’s manufacturing facility is constantly expanded to meet the changing needs of our customers.

Quality is built into the product by robust quality systems and stringent quality checks at every stage of operation from raw material selection to finished products. By this, we at GEECO ensure that each and every product out of the production line bears the stamp of Quality.
GEECO air preheater replacement parts are precisely fabricated to meet the original specification of custom engineered rotary air preheater. This ensures the same performance as the original equipment while maintaining the structural integrity.

**Rotor**
1. Rotor Post
2. Diaphragm Plates
3. Stay Plates
4. Rotor Shell Plate
5. End Plates
6. Rotor Gratings
7. Rotor Angle
8. Basket Removal Door Covers

**Heating Elements / Baskets**
1. Cold End Baskets
2. Cold End Intermediate Basket
3. Enameled Baskets
4. Hot Intermediate Baskets
5. Hot End Baskets
6. Future (sacrificing) Element

**Seals**
1. Radial Seals (Double Seals)
2. Soft Touch Seals
3. T-Bars (Machined or Conventional)
4. Axial Seal with Holding Strips (Double Seals)
5. By pass Seals with Holding Strips
6. Rotor Post Seal
7. Diaphragm Seal for Modular Rotor
8. Diaphragm cover sheet for conventional Rotor
9. Metallic Self Lock Nuts
10. By pass Seal Bar - Hot End only
11. Aluminium Finger Tab
12. All Seal Tabs
13. Pin Rack Tabs
14. Seal Straight Edge Aluminum
PRODUCTS

Housing
1. Main Pedestal Assembly
2. Side Pedestal Assembly
3. Housing Panels
4. Expansion Arrangement
5. Axial Seal plates
6. Axial Seal Plate to Sector Plate Seals
7. Static Seal Assembly
8. Axial Seal Adjuster Rods

Connecting Plate (Cold and Hot End)
1. Sector Plate with Inboard & Outboard Adjustors
2. Center Section
3. Static Seal Assembly
4. Stationary Spool Assembly
5. Stationary Spool Support Ring Assembly
6. Pipe Braces
7. Circumferential Seal Angle (Machinable and Conventional)
8. By pass Seal Angle

Support Bearing
1. Support Trunnion
2. Support Trunnion Bolts
3. Support Bearing Housing
4. Support Bearing Housing Cover
5. Air Seal Cover
6. Water Shield Assembly
7. Bearings

Guide Bearing
1. Guide Trunnion with Adapter Sleeve
2. Cap Plate with Screws
3. Housing Sleeves
4. Bearing Housing
5. Sealing Tube Assembly
6. Trunnion Sleeve
7. Guide Bearing Air Seal Assembly and Spares
8. Guide Trunnion Bolts
9. Tracking Rods
10. Bearings
PRODUCTS

Rotor Drive
1. Gear Box
2. Internals of Gear Box
3. Over Running Clutch Assembly
4. Air Motor
5. Pinion
6. Pinion Cover
7. Taper Lock bush
8. Carbon Ring with Tension Spring
9. Couplings : Flexible / Fluid
10. Pin Rack Assembly / Pins
11. Filter
12. Lubricator
13. Solenoid Valve
14. Pressure Switch
15. Rotor Stoppage Alarm

Oil Circulation System
1. Filter
2. Oil Cooler
3. Relief Valve
4. Pump
5. Coupling
6. Flow Switch
7. Sight Glass

Cleaning Device
1. Barco Swivel Ball Joint
2. Nozzles with Bend Pipe Assembly
3. Nozzles
4. Couplings
5. Gear Box & Its Spares

Wash & Deluge Assembly
1. Nozzles with Pipe Assembly
2. Nozzles
3. Strainer

Fire Sensing Device
1. Thermocouple Fire Sensing Device
ASSESSMENT

Our Team of Engineers can asses the present conditions of the air preheaters, suggest improvements to improve the performance of air preheaters and to increase the reliability of operation.

SERVICE SUPERVISION

GEECO service engineers are available at any time to discuss any matter concerning air preheater operation problems. Our Engineers can identify even the smallest problem that may lead to performance loss. Performance improvements, optimized solutions and long term partnership with customers are our objectives for efficient services.

RENOVATION AND MODERNIZATION

Modifying the existing air preheater represents the meaningful opportunity to bring additional revenue. To ensure the highest possible efficiency the most advanced design and technology are presented by GEECO.

NEW APH

We have successfully commissioned New Air Preheaters in M/s. Bharat Aluminium Company Limited, Korba for a 135MW, as a total replacement for the existing imported Air Preheaters. This was totally engineered in-house by GEECO with involvement in “Design, Manufacture, Supply and Site Supervision”
IMPROVEMENTS

To make successful air preheaters availability and efficiency improvements during plant outage, equipment inspection and evaluation studies of the operating parameters is necessary. Every air preheater is unique in design and operation environment. Efficiency improvement studies of a rotary air preheater consists typically of an expert site visit during shut down, for the purpose of thorough inspection and gathering pertinent data. Report dealing inspection results, recommendations, potential performance improvement and estimated cost implementation. Once the plant is convinced of the improvements, effort should be taken for the implementation of the accepted suggestions in the immediate available opportunity. Experience shows that in air preheaters, the improvements leads to a short pay back period. Hence it is worth to implement the improvements.

TESTING

For evaluating the performance of air preheaters, just making a single point measurement of temperature and $O_2$ is not sufficient. The performance test is to be conducted as per test code ASME PTC 4.3. This exact testing will be useful in finding solutions for improvement.

SEMINAR

Once in 2 Years GEECO conducts International seminar to update the knowledge on air preheaters. Till 2012 four Seminars has been conducted.
HEATING ELEMENTS

GEECO has established a sophisticated Heating Elements production line. The sheets are corrugated by rolling process and basketed for easy handling. By ordering the heating elements on GEECO, you are assured that the heating elements are manufactured from correct materials with accurate profiles and basketed for good fitment. GEECO manufactures heating elements with Carbon Steel and Enamel coated steel.

GEECO can supply any profile to meet the specific applications.
OUR MAJOR CUSTOMERS

Contact and Support

J. Albert Jeyachander
Deputy General Manager
Commercial

R. Shivakumar
Deputy General Manager
Field Engineering Services

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