

## RENOVATION AND MODERNIZATION OF AIR PREHEATERS AT TUTICORIN THERMAL POWER STATION, INDIA

Tuticorin Thermal Power Station is located in South India operated by Government of Tamilnadu. At this plant, 5 boilers of each 210MW is installed. All boilers are provided with Rotary Air Preheaters.



DISMANTLING OF OLD AIR PREHEATER

As a part of improving the efficiency of the boiler and reducing the leakage, R&M contract for supply and erection was awarded to GEECO for unit No 3 & 4 separately .

The size of Air Preheater was 27 VIT 72 for unit #3 and 27 VIMT 2000 for unit #4 of 2 Nos. In both boilers, the Air Preheater Leakage was around 15%.

The guarantee for this R&M contract was fixed to reduce the leakage below 6%. Apart from this target, effort was made to increase the boiler efficiency by reducing the fuel consumption.

### Some Special Features of this contract

- ◆ Increasing the height of Air Preheater from 72 inches to 80 inches for unit #3.
- ◆ Double sealing
- ◆ Modular rotor assembly
- ◆ Supply of machined T-Bars
- ◆ Introduction of sacrificing Baskets
- ◆ Soft touch Radial seals and Axial Seals

GEECO Supplied two Air Preheater of size 27 VIMT 80. The total supply was made with the shortest delivery period.



COMMISSIONING OF NEW AIR PREHEATER

The situation demanded for shorter erection time. The dismantling of old Air Preheater and the erection of New Air Preheater was completed in a record time.

The performance test was conducted by GEECO in presence of the customer to find out the leakage and the result achieved is given below, which is below the guaranteed value of 6%.

There is a significant reduction in fan loading and fuel consumption.

The **payback** is as low as **6 months**.

GEECO confirms to all Rotary Air Preheater users , that it is possible to improve the efficiency and reduce the leakage in most of the Air Preheaters by carrying out such type of R&M.

Leakage Percentage		
	Before R & M	After R & M
Unit #3	15%	5.65%
Unit #4	12.5%	5.41%

CASE STUDY