

ONE MORE SUCCESS AT HINDALCO INDUSTRIES

Hindalco industries is the leading manufacturer of Aluminium in India. For their power need at their Renukoot process plant, they have 11 Boilers at Renusagar as Captive power plant. All the rotary Air Preheaters (Size 24.5 VIT 57.5) available in their boilers were modified by GEECO to reduce the leakage and to improve the thermal performance. The results are tabulated below.

Unit No	Efficiency Improve-ment	Air Preheater Leakage		Payback in months
		Before R&M	After R&M	
#Spare	1.50%	19.83%	9.29%	9
#5	1.24%	17.41%	4.51%	10
#6	1.40%	9.69%	6.34%	13
#7	0.69%	7.65%	4.20%	12
#8	1.52%	6.80%	2.70%	13



REMOVAL OF OLD AIR PREHEATER

Realizing the benefits, Hindalco industries discussed to modify their rotary Air Preheater available at their process plant at Renukoot also. The size of the Air Preheater available was 23.5VIR1600. GEECO was asked to assess the Air Preheater and suggest the improvements. Based on the assessment and further analyzing with their operating conditions, it was recommended in addition by GEECO to increase the size of the Air Preheater from 23.5 VIR 1600 to 24 VIR 1750 by incorporating all the improvements.

To reduce the cost of the R & M, it was recommended to utilize the existing Support Bearing Assembly, Guide Bearing Assembly, Rotor drive Assembly and Soot blower Assembly. The bearings and drive adequacy was checked by GEECO and confirmed. Convinced by the recommendations, Hindalco industries placed an order to GEECO to increase the size of Air Preheater



INSTALLATION OF NEW AIR PREHEATER

Existing supporting columns were not disturbed.

The Air Preheater was designed such as to place the new Air Preheater within the limited accessibility available. The total dismantling & Installation of total Air Preheater was completed within the record time of 23 days.

The performance test was conducted by the customer to verify the improvement due to R & M. After the test it was declared by the customer that the Boiler efficiency had improved by 1.65% and the leakage is reduced from 11.5% to 6.5%. The **Payback** on account of this improvement works to *12 Months*

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