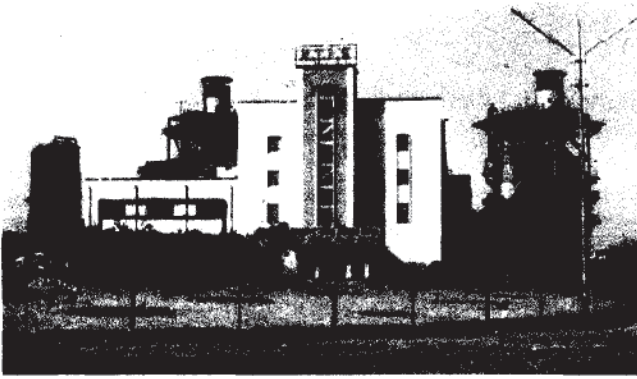


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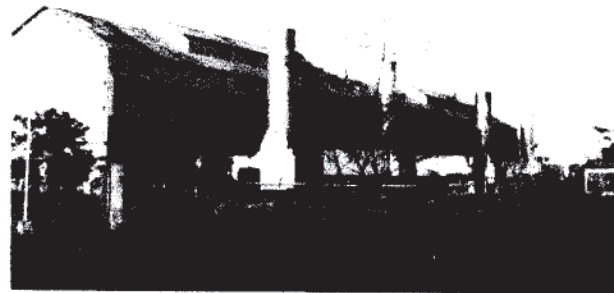
Report

On

***Evaluation of Station Heat Rates
For Namrup and Lakwa Thermal
Power Stations of APGCL***



Namrup TPS



Lakwa TPS

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Open Cycle Mode	
Design Station Heat Rate (NCV basis)	4304
SHR considering 2% degradation factor	4390
Design Gross Station Heat Rate Kcal/Kwh	4873

Partially Close Cycle Mode	
Design Station Heat Rate (NCV basis)	3736
SHR considering 2% degradation factor	3811
Design Gross Station Heat Rate Kcal/Kwh	4230

Actual Heat Rate Achieved by NTPS in FY 2012-13:

Open Cycle Mode	
Station Hear Rate (NCV basis)	4267
Gross Station Heat Rate Kcal/Kwh	4737

Partially Closed Cycle Mode	
Station Heat Rate (NCV basis)	3688
Gross Station Heat Rate Kcal/Kwh	4093

Data Source	Based on Test data collected from the Power Station	Based on Actual data for FY 2012-13	Based on OEM's Design Parameters
NTPS Station Gross Heat Rate on Open Cycle Mode (Kcal/Kwh)	4629	4737	4873
Average NTPS Station Gross Heat Rate on Open Cycle Mode (Kcal/Kwh)	4746		
NTPS Station Gross Heat Rate on Partially Close Cycle Mode (Kcal/Kwh)	4197	4093	4230
Average NTPS Station Gross Heat Rate on Partially Close Cycle Mode (Kcal/Kwh)	4173		

Comment: From the above it is seen that the Average NTPS Station Gross Heat Rate on **Open Cycle Mode** is 4746 Kcal/Kwh and Average LTPS Station Gross Heat Rate on **Partially Close Cycle Mode** is 4173 Kcal/Kwh, which are the most realistic **Open Cycle** and **Close Cycle** Gross Station Heat Rate of NTPS respectively.

Praveen Kumar

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Special Issues:

- It was observed during site visit and the experimentation that the gas pressure at LTPS and NTPS station seems to vary intermittently without control, which affects the operation of the generating units making it not possible to operate at a specific desired output levels. It was observed that the power output under such conditions remained at very low levels and therefore high heat rates.
- The load profile data obtained from APGCL do not contain any such low power output data and therefore do not account for such low power output operation.

Additional attachments:

1. NTPS test data
2. NTPS generation data
3. LTPS test data
4. LTPS generation data

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