PLANT & EQUIPMENT TROUBLESHOOTING, PERFORMANCE ASSESSMENT, TESTING & OPTIMIZATION

Inspection & life/performance assessment technology for older power plants provide the optimal time for the replacement or the maintenance of damaged component.

Features & Activities

- **Equipment inspection and assessment of mechanical conditions and process performance**
- **Boiler/Turbine/BOP Performance Test Assessment**
- **Boiler Performance Analysis**
- **Steam Turbine Cycle Performance Analysis**
- **Feasibility Study for Power Plant Upgrade**

Improvement in thermal performance can help to achieve a competitive advantage by lowering operation cost and increasing the output. Performance degradation is often good indicator of the types of problems occurring within the equipment. Proper analysis of thermal performance degradation can lead to an early identification of the cause.

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Performance monitoring activities have following purpose:

- **Detect deterioration in the thermal performance by trending changes in various performance parameters**
- **Identify by proper data evaluation and interpretation the cause of performance degradation**
- **Develop cost effective solutions to correct operational and equipment problems that contribute to the degradation in thermal performance**

Features & Activities

- **Thermal calculation and heat balance**
- **Process Performance calculation and optimization**
- **CFD flow study**
- **Performance testing and supervision**

Plant performance testing and supervision

The value of the performance test data analysis greatly depends on the quality of the data. The use of acceptance test procedures such as PTC 46-1996 Overall Plant Performance Test and other relevant ASME PTC testing procedures to obtain periodic performance results yields the most accurate test data for analysis and evaluation. Continuous performance monitoring doesn't necessarily require absolute accuracy, but is useful in establishing accurate trends of various performance characteristics.

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Initial check

The purpose of the initial check is to analyze the existing status and condition of the plant and to collect all necessary data and to set up the basis for more detailed analysis.

The scope of works will include analysis of the unit design, operating performance, specification and collection of necessary data and summary of the existing status.

- Data collection and process evaluation of the existing plant
- Thermodynamic cycle check – comparison of data sheets and planned values with measured actual operational data, planned and actual electricity and heat production, efficiency check
- Multi-discipline utilities process and media flows check
- Cycle optimization possibilities
- Equipment actual technical condition, equipment track record check, looking for critical equipment form the point of view reliability and insufficiency

Long term operation check / monitoring

Based on the result of the initial check, the scope of services will include identification of plant systems that will be monitored on long term basis to understand and optimize the performance. The target will be to continuously analyses selected systems to verify the operating performance in the long-term basis and to identify various options to modify the plant.

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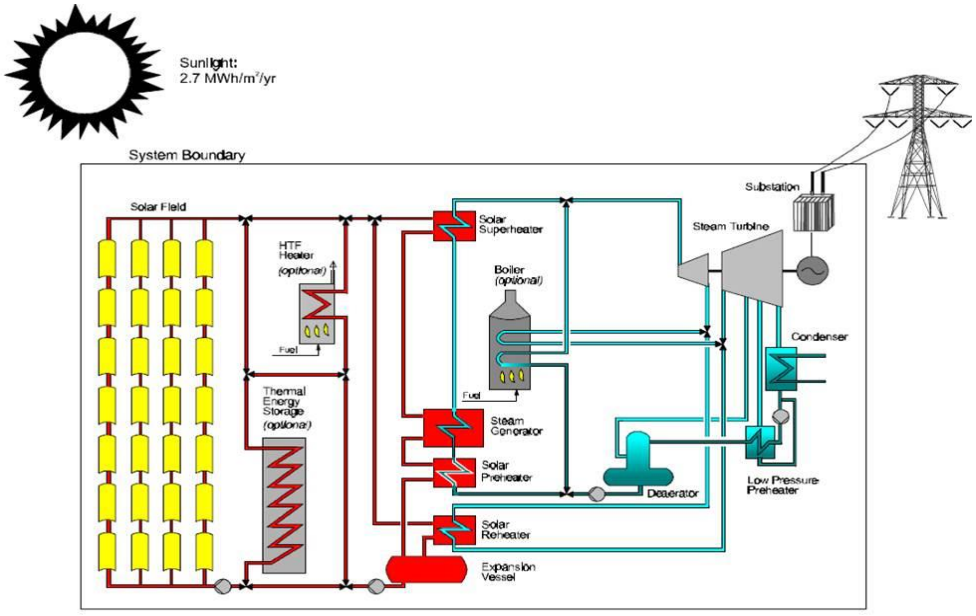
Based on monthly /quarterly operating plant results, proposal for the improvement shall be identified including:

- Utilities process and media flows check
- Equipment actual technical condition, equipment track record check
- Operational risks and results, problems identification and recommendation of solving
- Performance indicators evaluation

Identification of potential modifications of the plant and elaboration of the detailed analysis / study

The result of the initial check and the long-term operation check will set the basis for identification of alternatives to modify the plant to improve efficiency, reduce consumption of utilities and operating cost.

Alternatives to modify the plant shall be discussed with the plant management and selected options will be further analyzed and detailed as necessary.



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