



Thermal Performance Testing

In today's power industry, plant personnel have fewer resources and time available to quantify one of the most critical aspects of a power plant: Thermal Performance.

In response to this need and to assist the plant engineering operations, and maintenance groups, True North Consulting offers Thermal Performance Testing.

Results from Thermal Performance Tests assist plants in quantifying equipment performance, identifying and quantifying losses, minimizing or preventing future losses, and optimizing unit operation. Additionally, testing can be used to meet environmental or grid controller requirements.

Thermal Performance testing results can be used to:

- Schedule maintenance outages
- Evaluate equipment modifications
- Evaluate changes in operating procedures
- Detect location of performance changes
- Establish baseline performance for major equipment
- Meet environmental commitments (316.b)
- Diagnose performance degradation
- Independently evaluate turbine retrofits (3rd party evaluations)
- Assist load dispatching to reduce overall utility fuel usage
- Evaluate energy credits or carbon usage

TRUE NORTH CONSULTING'S CAPABILITIES

True North Consulting is highly qualified to perform routine thermal performance and equipment acceptance testing. Our engineers have extensive experience in various types of power plant testing in accordance with the applicable industry standard test codes (ASME, ATC, ASHRA, etc.)

- Heat Rate testing
- Capacity testing
- Steam Turbine testing (nuclear, fossil, combined cycle)
- Gas Turbine testing
- Feedwater Heater testing
- Cooling Tower testing
- Boiler testing
- Pump testing
- Condenser testing

- Accurate flow testing
- Diagnostics
- Troubleshooting
- Overall plant monitoring
- Heat Exchanger testing
- Moisture Separator Reheater testing

True North Consulting can also provide custom Thermal Performance Testing services to fit individual plant requirements.

METHODOLOGY

- Participate in an on-site kick off meeting
- Perform on-site plant walk down
- Prepare information request
- Review plant schematics, P&IDs, heat balances and other plant data
- Prepare detailed test procedure in accordance with applicable test codes
- Provide sufficient manpower to properly install and validate test instrumentation
- Perform pretest analysis with thermodynamic modeling software
- Prepare test calculation spreadsheet using TP-PLUS TSM Thermal System Monitoring Software
- Prepare cycle isolation analysis using TP-PLUS CIM Valve Leakage Analysis Software
- Provide on-site test supervision, coordination and support
- Perform detailed data reduction, test data analysis
- Deliver a peer-reviewed, comprehensive final report with incorporation of customer comments

INSTRUMENTATION

True North Consulting uses state-of-the-art, high accuracy instrumentation, data acquisition systems and software. An additional benefit to using True North Consulting is the ability to accurately measure critical system flows with advanced cross-correlation flow measurement techniques.

SUPPORT AND ADDITIONAL SERVICES

As a feature of our "total plant solution" approach, we are able to integrate thermodynamic modeling, analysis and other unique plant optimization concepts for consideration

as an extension to our testing services or as an adjunct to a client's testing program.

CONTACT US!

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WHY TRUE NORTH CONSULTING?

True North Consulting's engineering knowledge spans the full range of Thermal Performance services including modeling, analyses, and testing, incorporating all major plant equipment and systems in a power facility. True North Consulting's engineers have extensive experience in the power industry from both the consulting and power generating company perspectives with detailed experience working in performance, maintenance, engineering, operations, and planning.

True North Consulting can provide a full range of performance testing services including complete turnkey performance testing, development of new performance test procedures, review of existing performance test procedures, review of calculation processes, data analysis, diagnostics and uncertainty analysis.

True North Consulting is known as a leading provider of thermal performance services and supporting products in the power plant industry.

True North Consulting's extensive plant service experience combined with the application of convenient and powerful products provides the highest quality overall solution for a thermal performance monitoring program in nuclear, fossil and combined cycle generating plants. True North Consulting is well known in the industry for quality support and complete customer satisfaction.