Frequently Asked Questions: Field Diagnostic Study

What is this for?	This is for steam conditioning valves and Attemperators.
What is it?	A diagnostic report on the performance of desuperheating within steam conditioning valves and Attemperators. The report includes: • photographs and comments on the installation; • measurements of temperature gradients in downstream; • operating data for the system from the plant DCS; • valve position data; • observations on any anomalies in these systems; • Recommendations for future investigation or improvements.
Why should I do this?	Common installation, maintenance, and control problems in Attemperators and turbine systems and desuperheaters can cause thermal fatigue cracks in valve trim, valve bodies, and in high energy piping. The diagnostic study will determine if the desuperheater performance is likely to contribute to the thermal fatigue cracks.
What am I going to get?	A professional engineering report, typically about 20 pages. The report includes: • photographs and comments on the installation; • measurements of temperature gradients in downstream; • operating data for the system from the plant DCS; • valve position data; • observations on any anomalies in these systems • Recommendations for future investigation or improvements
Will this solve my problems?	The diagnostic study is an important for evaluating system performance. The purpose of this study is to identify problems with the spraywater control system and desuperheater and submit recommendations for customers to implement.
What does it cost?	The cost of the study varies with the number of valves in the system and the units. Please contact your local CCI Customer service representative for a quote.
How long does it take?	Typically, one week at site for data collection on 2 valves and three - four weeks thereafter to collate the data and generate a report.
What do I need to do?	We need your assistance with data and access to the valves (see above).
What kind of equipment do you bring to site?	Our diagnostic engineer will bring two large travel cases to site. One case contains the instruments and tools we need to mount position transmitters and thermocouples. The other includes a data acquisition system. The data acquisition is a weather-proof junction box (NEMA ?). Please see above for more details on this system.
What is the lead time?	We would like 4 to 6 weeks advance notice to prepare for the trip and make sure that our technicians, engineers, and instruments are available. Please contact factory for faster lead times.

Where have you done this before?	We have done this kinds of tests at several plants: pulp and paper mills in Sweden, Power plants in USA, Mexico and the Middle east.
What happened afterward?	In most cases, clients make improvements to their controls based upon our findings and recommendations. In some cases, clients also upgrade the designs of steam conditioning valves, Attemperators and spray valves to improve system performance and longevity.
How many systems can you study?	We will typically record data on two systems during one visit: one HP and one HRH bypass valve; two HRH bypass valves; etc.. It is possible to instrument more systems; please contact us to discuss this.
Does this include FEA analysis?	No; please contact us to discuss this.
Does this include pipe stress analysis.	No. Our expertise is in design and performance of steam conditioning systems and attemperators.
What kinds of plants is this for?	CCPS, Cogen, CHP, or any thermal power plant with load cycling or concerns about the performance and reliability of steam conditioning systems and attemperators.
What are the terms and conditions of sale?	Our diagnostic engineer will travel to and work at site in accordance with CCI Field Service conditions.
What about safety?	Our diagnostic engineer will participate in any safety programs which your site requires. He will typically bring with him steel-toed boots and safety glasses. The instrumentation process is non-intrusive and does not compromise the operation and safety of the system. Please let us know in advance if CCI personnel are not permitted by plant labor contracts or to work on these systems.