

Siemens - Westinghouse 501 FD Gas Turbine Internal Laser Alignment

PROJECT SCOPE

There was a major outage on a Siemens - Westinghouse 501 FD Gas Turbine. There was a rub on the Rotor from the torque tube. It was determined that an internal alignment had to be performed to return the unit to optimal operating condition. The turbine was outside, so measurements could only be taken in a short window during the night time. A great way to perform the internal alignment quickly and to the desired specifications would be to perform a gas turbine internal laser alignment.

HOW WAS ACQUIP INVOLVED?

ACQUIP was able to mobilize to the job site when the alignment was ready to be performed. The turbine was checked for its pre-alignment condition and Acquip was able to start taking data immediately. A laser was shot from the inlet to the exhaust bearing and all measurements were recorded for the bearings, turbine section, torque tube and compressor section. ACQUIP was able to determine that a move was required on both the inlet and exhaust bearings in order to correct the torque tube and compressor section clearances.

RESULTS OF THE PROJECT

ACQUIP was able to shorten the outage by quickly acquiring all alignment readings. This was primarily due to ACQUIP methods, experience and technical ability to measure the entire turbine section from one setup. The Gas turbine efficiency was improved and the unit came on line without issue. ACQUIP was able to quickly mobilize to the job site when needed, as to not waste resources during assembly.

