

FARO Laser Tracker Turbine Shell Distortion Study

PROJECT SCOPE

PCS Nitrogen was in the process of completing an outage on a Siemens steam turbine. When the top was placed back on the turbine the two horizontal joints would not mate up properly. PCS Nitrogen needed to determine which turbine half was distorted and what was the exact amount of distortion. The distortion amounts needed to be fed into a CAD program so that the joint could be machined exactly to fit together correctly.

HOW WAS ACQUIP INVOLVED?

ACQUIP was able to quickly mobilize to the jobsite with a FARO ION Laser Tracker. We were able to quickly take over 3,000 measurement points on both the upper and lower half of the horizontal joint. The maximum measured shell deflection matched exactly what the plant recorded from the feeler gauge readings. The CAD files were created and fed into a filed machining system to correct the horizontal joint surface.

RESULTS OF THE PROJECT

ACQUIP Alignment Engineers determined the deflection accurately and quickly using the FARO ION Laser Tracker. PCS nitrogen was then able to use the data to quickly fix the issue with the steam turbine and return it to service.

