

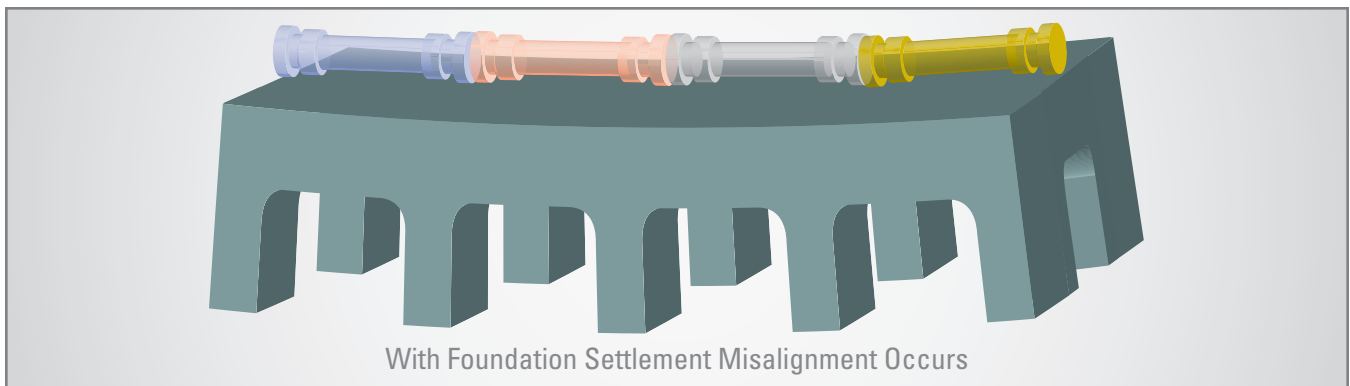
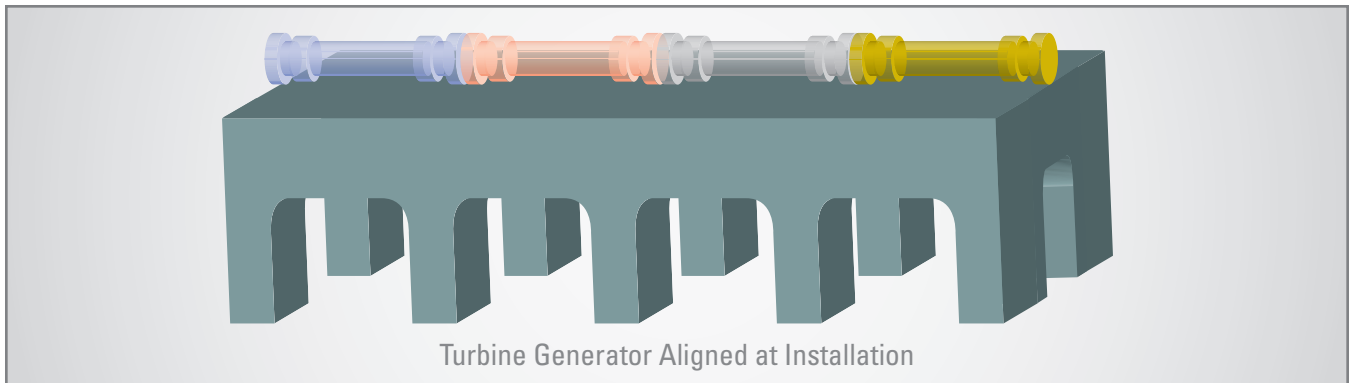
TURBINE FOUNDATION MEASUREMENT SERVICES

Monitoring Foundation Displacements

About Foundation Measurement Services

MD&A offers customers a unique service that allows them to monitor their Turbine-generator foundation over time and understand the affects that turbine foundation settlement has on their equipment alignment.

Using a combination of laser and optical measurements, MD&A's advanced foundation measurement process (patent pending), measures custom monuments installed in a turbine foundation and establishes a baseline set of readings tied to a complete set of turbine coupling alignment readings.



At a future date, additional foundation and turbine measurements are made (normally made with the turbine online), and these new measurements are compared to the baseline. MD&A uses the changes in foundation displacement to calculate both vertical and horizontal changes to the turbine-generator coupling alignments.

This process allows turbine generator owners to move from a calendar based schedule for coupling alignment checks, to a conditioned based.

Applications

MD&A's Foundation Measurement Process is recommended for medium and large steam turbine applications

- New Turbine-Generator Installations
 - Establish a baseline for future monitoring
- Older Installed Turbine-Generators
 - Following a major inspection with realignment, establish a baseline for future monitoring
 - Hot and Cold measurements taken to verify changes in bearing elevations
 - Provide measurements to assist with identifying turbine foundation interface problems



Why Choose MD&A to Perform your Turbine-Generator Foundation Measurements

MD&A has a long history of providing innovative solutions to difficult turbine generator related operational and maintenance problems. Our foundation measurement service is unique in that we can monitor both vertical and horizontal turbine foundation displacements, on even the largest turbine foundations.

The work is performed by Turbine Engineers who have life long experience working on turbines like yours. They understand both the technical aspects of the job and know what it takes to solve difficult problems. You can count on:

- Exceptional quality
- Fast response
- Highly skilled alignment professionals working to solve your problems and reduce your down time

MECHANICAL DYNAMICS & ANALYSIS

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