Hyperbolic Cooling Tower - Structural Assessment and Monitoring

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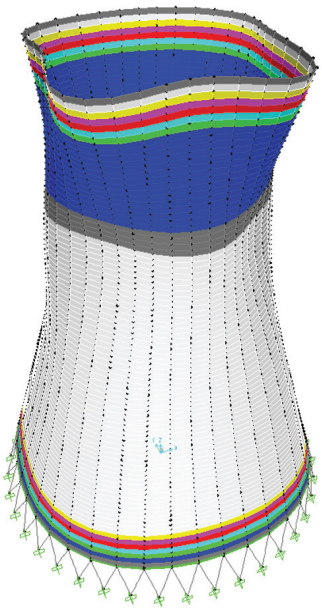
STRAAM offers proven analysis of cooling tower stiffness and performance.



Finite Element Model and Failure Mode Analysis

Hyperbolic Cooling towers are an integral component for large coal fired and nuclear power plants. Many of these structures were built in the 60's and 70's and are nearing the end of their intended design life. Due to the operating conditions they are subjected to, these structures can experience accelerated degradation during the later stages of their life causing an exponential decrease in performance. Yet cooling towers are very difficult to assess due to their size.

STRAAM offers a proven approach to analyzing the stiffness and performance of cooling towers so engineers and owners can understand how much stiffness the structure has lost over the years. This can be used in a risk assessment, to track changes in the condition and to determine when to replace the structure.

STRAAM'S METHODOLOGY INCLUDES:

Risk Analysis

- Systems identification to capture natural frequencies and response of the structure to the action of wind.
- Stiffness comparison to its original design.
- Failure mode analysis to identify specific potential risk scenarios
- Use the above information to help structural engineers determine the response of the structure due to the action of a seismic event.

Monitoring during rehabilitation

- Track changes to the performance of the structure to monitor the risk profile.
- 'Pre' and 'Post' condition assessment to provide a periodic summary of any changes to the structure due to aging or severe events.

Continuous Monitoring

- Offer clients a permanent record of the performance of the structure under all conditions.
- Track changes for immediate analysis.

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