

Cooling Tower “As-Found” Performance Curves

Background

Cooling towers often do not receive the recommended testing and predictive performance analyses that can help determine the loss in a plant’s capacity or heat rate. A heat reduction cycle analysis can predict the efficiency of, and even economic break-even points for, cooling tower modifications.

CleanAir’s Approach

CleanAir can generate “as-found” performance curves for existing cooling towers. These curves can be used to predict return cold water temperatures under different wet bulb conditions, water flow rates, and heat loads. For specific diagnostic applications, air flow rates from selected cells also can be measured to provide a means of evaluating fan performance.

Results

Performance curves have proven valuable for evaluating older towers where performance curves may be lost, or where modifications, degradation, or changing heat loads may have made the original curves inapplicable.

Summary

Acceptance testing and performance curves for new or rebuilt cooling towers provide predictive data that can dramatically improve performance.

