# Fill Fouling evaluation analysis

## SERVICE OVERVIEW

Years of service can result in the accumulation of foreign matter on the surface of cooling tower fill, also referred to as "fill fouling." Fouling can result in a reduction in the cooling efficiency of the tower, as the deposits interfere with air and/or water flow through the fill. Structural integrity of the tower can also be compromised in severe cases of material accumulation.

The solution is – monitoring the weight of fill media over time to track fouling, seeking opportunities to reduce fouling, and translating the data to help customers make decisions on budgeting future capital expenditures (fill replacement).



# SPX SERVICES

- Two levels of service
  - Level 1 Field testing/analysis on a one-time basis.
  - Level 2 Longer term fill testing "program" where the customer would have weigh racks on-site for long-term tracking of fill condition. Performance curves are developed showing actual weight versus predictive weight for a given fill type.
- · Assisting the customer to find sources of fouling.
- Communicate any risks such as excessive weight and stress on structural components.
- Determining fill life cycle and replacement timeline for budgeting purposes.

# **Fill Fouling**







### SPX ADVANTAGE

- Formal test procedures We have the experience from years of field testing to know how, and when to test (e.g. the weighing must be completed within 24 hours or else the results cannot be used).
- We have a proprietary weigh rack design used at the customer's site or reliable lab testing of fill samples.
- Our R&D capabilities have allowed us to perform pilot-scale studies to produce standards to compare your field measurements.
- As cooling tower designers, we understand the impact of excessive weight on tower structural safety.
- Bottom line: Anyone may be able to weigh fill packs. The real value is the interpretation of results in terms of performance and lifecycle. Our service allows the customer to develop a long-term budget for fill replacement. Just as with material testing, we are providing customers with data to use when making budgeting decisions. Currently customers have to make decisions based on visual inspection.

# A TOTAL SOLUTION

You'll find a full suite of technical services available to help ensure your operation is efficient, optimized and compliant. Where applicable, our technicians and methodology abide by CTI and ASME guidelines; and regardless of process or procedure, our staff is dedicated to delivering the highest standards of quality and accuracy.

Ultimately, what SPX Cooling Technologies offers is the peace of mind that over a century of cooling tower experience can bring. Because we design, engineer, manufacture, and service world class cooling tower brands, it only stands to reason we understand them better, inside and out.

When you need consultative technical services for your cooling towers—whether it's to diagnose or upgrade individual units or entire systems—you need to remember only one name: SPX.

#### **TECHNICAL SERVICES OFFERED**

- GEARBOX DIAGNOSTICS AND REPAIR THERMAL PERFORMANCE TESTING MATERIAL TESTING MECHANICAL SYSTEMS DIAGNOSTICS FILL FOULING EVALUATION ANALYSIS SPECIFICATION DEVELOPMENT OPERATOR TRAINING OUTAGE MANAGEMENT TEMPORARY COOLING EXTEND SERVICES MARLEY OEM PARTS KITS AND PACKAGES
- SPX COOLING TECHNOLOGIES, INC.

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