Steam Coil Cleaning At Large Manufacturing Plant Is Tremendous Success

Problem
A large manufacturing plant in the Northeastern U.S. needed precise humidity and temperature control on their production floor. They had used several contractors over the past 14 years to clean the coils in their 12 air handling units (AHUs), but none of them were successful. The Chem-Aqua Representative who provides water treatment services at the plant became aware of the situation and recommended having a Chem-Aqua Services Technician conduct a survey and suggest a solution.

Analysis
Chem-Aqua Services surveyed the site and recommended steam cleaning. Due to the large size of the 12 AHUs (20-25 tons each) and the logistics of their set up (scattered around the facility’s production floor making it hard to reach the coils), either a very high water volume or steam would be required. Chem-Aqua Services believed steam was the best option: they would use a direct fire steam generator and a manifold of three 100-pound cylinders feeding the burner unit to generate the amount of steam necessary to successfully clean the coils. The customer agreed to have one of the 12 AHUs steam cleaned as a trial. Before and after air flow readings established the AHU was operating at less than 50% capacity prior to the steam cleaning. Final results of the trial were outstanding with improved air flow of 174%.

Solution
The customer was tremendously pleased and arranged to have Chem-Aqua Services steam clean the remaining 11 AHUs. To reach all of the AHUs, a wheeled cart with rails was constructed to transport the steam cleaning equipment throughout the facility. The steam penetrated several impacted coils and successfully cleaned them, something previous contractors were unable to accomplish. Once the AHUs were restarted it was evident the overall air flow had improved (the facility's coils were cleaned quarterly so any improvement would have been significant). The increase in air flow for the 11 AHUs ranged from 7-23% higher than prior to cleaning.

The customer was so pleased with the steam cleaning work the team performed, and the subsequent increase in the AHUs’ air flow, that he immediately scheduled future coil cleaning business with Chem-Aqua Services.