

Case Study: Alliance One Turns To Utility Plant Solutions For Improved Plant Performance.



Alliance One is one of the largest tobacco manufacturers in Eastern North Carolina. The company was starting up a brand new manufacturing facility in Wilson, N.C. and called on Utility Plant Solutions to conduct a Steam and Condensate

review at the new processing plant. Alliance One wanted to identify deficiencies in their new plant's steam and condensate systems that were adversely affecting operation of the plant's manufacturing equipment and processes.



Utility Plant Solutions began with an initial analysis of critical issues effecting plant process equipment from first "coming on-line" all the way to "full capacity" performance. Utility Plant Solution's analysis determined that several of the new pieces of manufacturing equipment were not fitted with the correct sized steam traps to handle the equipment "start-up" energy loads - causing long wait times from warm-up to process temperatures. Utility Plant Solutions replaced the undersized steam traps after discovering the deficiency. Resulting in process equipment warm-up times reduced to a fraction of the times prior to the analysis.

Next, Utility Plant Solution took a comprehensive look at the process and system condensate steam and how it was being returned to the steam plant. It was immediately discovered that a lack of pumped condensate receivers was forcing manufacturing equipment to rely on system pressure to push the condensate back to the DA.



Based on this discovery, Utility Plant Solutions recommended installation of a new pumped condensate systems for each piece of process equipment and remove "back pressures" from the process traps. Engineering drawings were produced and Utility Plant Solutions worked with the Alliance One's mechanical contractor to install new condensate pump stations in a timely manner. Result: The new pumped condensate stations immediately improved plant manufacturing process equipment performance.

Utility Plant Solutions was called on to determine if an increase in the capacity of the Conditioning and Casing Cylinders could be achieved. These are two of the larger pieces of equipment involved in the tobacco manufacturing process. Working with the plant's operations team, Utility Plant Solutions identified a steam "choke point" in the pressure regulators and control valves. After careful review of cylinder operations, Utility Plant Solutions recommended new, larger sized pressure regulators and control valves to increase capacity of the equipment. Utility Plant Solutions worked with the company's mechanical contractor to modify and replace regulators and control valves. As a result, the capacity of the plant's main tobacco process equipment nearly doubled.



Conclusion

The Steam and Condensate study was one of many engineering studies Utility Plant Solutions has provided to Alliance One in an effort to help increase productivity and minimize down time at the company's Wilson plant. The recommendations gleaned from the analysis resulted in production increases of nearly 50%, a reduction of production shifts (three down to two) and helped the company realize an estimated \$100K/week productivity increase, and substantial energy cost savings.

Following the study, Utility Plant Solutions provided engineering and control services for a steam plant upgrade that included installation of a larger boiler, DA, and Condensate Tank. Utility Plant Solutions is proud of the great relationship it has with Alliance One and continues to provide professional services on a regular basis - helping the company optimize process equipment (new and old) while providing a wide range of equipment operations and maintenance support.

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Utility Plant Solutions

Over 20 years of experience in Steam and Chill
Water Plant Operations and Maintenance