



CASE STUDY

INDUSTRY: EDUCATION



CUSTOMER: Bowling Green State University (BGSU)

LOCATION: Bowling Green, Ohio, USA



BACKGROUND: By initiating and implementing a steam trap management program, BGSU has begun to realize its energy management goals and improving the efficiency of its steam utility system. BGSU's Heating Plant consists of three natural gas boilers that distribute steam to the entire campus through an underground tunnel system. Through a process developed by Armstrong International and supported by a representative affiliate Merlo Energy, BGSU has reduced the costs, carbon emissions, and gained critical knowledge of its steam system.

SCOPE OF WORK: In an effort to make enhancements to the steam system, BGSU's Facilities Management team, under the recommendation of Merlo Energy, partook in a two-day seminar hosted by Armstrong and Western Michigan University. The knowledge and instruction gained through the seminar would launch a full campus steam trap survey and major condensate pump retrofit program at BGSU.

By utilizing Armstrong's SteamStar® steam trap monitoring tool, a campus-wide survey was completed after one year with all survey logs and data being collected. Survey analysis reports generated by SteamStar® from the first heating cycle showed a trap failure rate of about 15%, which corresponded to over \$220,000 in yearly losses. Over the course of 2 years, by conducting campus-wide surveys on a yearly basis and managing the data in SteamStar®, BGSU lowered its trap failure rate, carbon emissions, and saved over \$120,000 in defective steam traps. Continuous 24/7 monitoring of traps in the heating plant by Armstrong's SteamEye® devices have reduced blow-through losses to \$0 per year.

BENEFITS: BGSU has observed significant savings monetarily, in carbon emissions, and in labor costs. As this trend continues in a downward direction, calculations and reports derived from the yearly surveys are a strong foundation for directors and managers to validate funding to drive the steam trap management program forward. BGSU's steam trap management program continues to grow and evolve, and proves to be a key driver of the university's energy conservation initiatives.

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