



CASE STUDY

INDUSTRY: EDUCATION



CUSTOMER: University of Notre Dame



LOCATION: South Bend, Indiana, USA

BACKGROUND: To help monitor and maintain the University of Notre Dame's steam distribution system, a steam trap management program was implemented. Efforts were focused on the campus power plant's high pressure steam production, and within 2 years, Notre Dame was able to reduce power plant steam costs by 21%.

SCOPE OF WORK: Notre Dame's Utilities Department examined potential savings that could be achieved through a more efficient management of the power house steam system. Working with Affiliated Steam and Hot Water, utilities supervisors and managers traveled to Armstrong International to learn more about the merits of creating and taking ownership of a campus-wide trap management program. The program would facilitate proactive trap replacements saving money, fuel and labor costs. Armstrong shared techniques for trap testing and trap database maintenance using SteamStar®, a web-based software, and highlighted Western Michigan University as a model of success.

Notre Dame conducted its first survey on steam traps located within the power house with plans to eventually survey the entire campus. The first survey showed a steam trap failure rate of 31.4%; considerably higher than the industry average. After replacing defective traps and conducting a resurvey, the failure rate fell to 15.7% and annual steam loss was reduced by more than 9.6 million pounds. Within two years of the inception of the program and the first survey, Notre Dame reduced the steam trap failure rate by 20.7%, steam loss by 11.8 million pounds, and CO2 emissions by 3.4 million pounds. This 21% cost reduction is solely associated to the steam production within the power house.

Notre Dame continues to expand its trap program in efforts to compound cost savings and energy management efforts. With such great success in the power house, surveys were ordered for every campus building. Survey reports are documented and managed using SteamStar®, leveraging the value that the steam trap management program provides to the university.

BENEFITS: The university has saved more than \$70,000 in steam related costs over a short period of time. A reduction in carbon emissions has furthered the university's efforts in becoming a leader in sustainability and energy conservation.

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