



CASE STUDY

INDUSTRY: HIGHER EDUCATION



CUSTOMER: Northwestern University, Evanston Campus

LOCATION: Evanston, Illinois, USA

BACKGROUND: Northwestern University's 240-acre campus in Evanston, Illinois is home to over 21,000 students and around 3,300 full-time faculty members. Armstrong International's local representative, Affiliated Steam & Hot Water built a long-lasting relationship with Northwestern University founded upon dedicated time, energy and attention to the university's needs and goals.

The rapport between Affiliated Steam & Hot Water and Northwestern was established and has been maintained because of the customer's trust in the solutions and service that Armstrong and Affiliated have provided.

SCOPE OF WORK: Throughout the years, several steam system audits were conducted by Affiliated to determine the costs and system stability associated with the steam loss within their steam system. Yearly audits unveiled opportunities for trap improvements based on failure rates, blow thru traps, CO2 loss and defective traps.

After implementing a best practice trap management program based on Armstrong and Affiliated's recommendations, the campus realized significant reductions across the board.


	YEAR 1	YEAR 3	YEAR 4	YEAR 5	YEAR 6	
Total Traps Surveyed	1,732	1,830	1,839	1,851	1,964*	*Less 1838 Chicago, Ridge, Kresge, McGaw & Willard
Defective Traps	403	71	43	82	114	71% Reduction/2013
Failure Rate	23%	3.90%	2.4%	4.4%	5.8%	74% Reduction/2013
Blow Thru Traps	261	36	14	16	88	66% Reduction/2013
Steam Loss/lbs.	104,968,251	19,256,270	70,23,018	10,342,619	43,244,005	59% Reduction/2013
Monetary Loss	\$2,172,843	\$404,322	\$142,198	\$206,852	\$865,122	60% Reduction/2013
Cost of Steam/1,000lbs.	\$20.71	\$21.00	\$20.00	\$20.00	\$20.00	
CO2 Loss/lbs.	16,662,282	3,342,440	103,892	1,713,235	7,260,550	56% Reduction/2013

Armstrong International

INTELLIGENT SOLUTIONS IN STEAM, AIR AND HOT WATER

North America • Latin America • India • Europe / Middle East / Africa • China • Pacific Rim

armstronginternational.com



UPGRADE PROJECTS: As a result of the Steam Trap Management Program, the following upgrade projects were also supplied:

- Installation of three (3) Digital-Flo® hot water heaters. Ease of installation, exceptional expertise and customer service were noted by the customer.
- The Brain® replaced competing mixing valves and is now the specified choice for digital mixing valves.
- Armstrong HumidiPack® humidifiers replaced competing malfunctioning units because of the ease of retrofit, reliable performance and outstanding service and support.
- Replacement traps and support.

Armstrong International

INTELLIGENT SOLUTIONS IN STEAM, AIR AND HOT WATER

North America • Latin America • India • Europe / Middle East / Africa • China • Pacific Rim

armstronginternational.com