



ELIMINATING OVER \$100,000 IN ANNUAL STEAM LOSSES

TARGETED STEAM SYSTEM IMPROVEMENTS REDUCED LOSSES, IMPROVED RELIABILITY AND LOWERED COSTS

EXCESS CONDENSATE WAS IMPACTING STEAM SYSTEM PERFORMANCE, PROMPTING A SITE-WIDE SURVEY TO IDENTIFY HIDDEN LOSSES

A large chemical manufacturing facility was experiencing excessive condensate throughout its steam distribution system, creating operational challenges for turbines, heat exchangers, and steam traps. To improve system performance and reduce unnecessary energy losses, the site engaged Hydrus Works to conduct a comprehensive drip leg (mud leg) survey and identify hidden sources of inefficiency.

CHALLENGE

The facility's steam system had become saturated with condensate, resulting in heat loss, steam loss, and increased stress on critical process equipment. Steam traps were overloaded and flooding with condensate, creating reliability concerns and increasing maintenance demands across the site.

SOLUTION

Hydrus Works conducted a site-wide drip leg survey using infrared inspection technology, non-contact temperature measurement, and field verification techniques to identify cold and plugged drip legs throughout the steam system. During the survey, drain valves were opened to remove accumulated condensate and debris while documenting system conditions.

The survey provided a detailed inventory of system deficiencies, including drip leg locations, piping information, steam losses, and estimated annual financial impact. This data allowed the site to target corrective actions where they would deliver the greatest operational benefit.

RESULTS

The survey identified significant opportunities to improve steam system performance and reduce unnecessary losses.

- Identified 90 plugged drip legs
- Uncovered an estimated \$114,000 in annual steam losses
- Reduced excess condensate within the steam system
- Lowered stress on steam turbines, heat exchangers and steam traps
- Improved overall steam system reliability and efficiency

Hydrus Works recommended incorporating routine drip leg surveys and periodic blowdown activities into the site's preventative maintenance program to help sustain long-term performance.

Targeted drip leg surveys identified over \$114,000 in annual steam losses, improving steam system reliability while reducing equipment stress and operating costs.