



Case Study #2-5

Company Name: DaimlerChrysler Corporation

Number of Facilities (as applicable): 1

Year(s) of Implementation: 2000-Ongoing

Description of Activity: DaimlerChrysler's Sterling Heights Assembly Plant – **Steam trap maintenance & repair program.**

Promotes efficient operation of end-use heat transfer equipment and reduces live steam in the condensate system. Steam traps are automatic valves used to remove condensate, air and other non-condensable gases while preventing (or minimizing) the passing of steam. It has been estimated that approximately 20% of the steam leaving a central boiler plant can be lost via leaking steam traps in systems without proactive assessment programs.

The purpose of an assessment program is to answer the following two questions:

1. Is the trap working correctly or not?
2. If not, has the trap failed in the open or closed position?

If the trap has failed closed, then no energy is being wasted. But then in the case of a heating unit, no heat or reduced heating is available. If the trap has failed open, then steam will pass through the trap without providing its maximum heating potential. The steam may also escape through the system vent if it does not condense in the return system, thus requiring additional makeup water and associate treatment at the steam plant - further increasing operating costs, and impacting the environment from wasted energy and water consumption.

Specific Energy, GHG, Cost Benefits Achieved: The Sterling Heights Assembly Plant achieved annual savings of approximately 919,000 MMBtu from the steam trap repairs. The repairs prevent approximately 49,000 metric tons of CO₂ emissions on an annual basis.

Additional Environmental Benefits: Air quality is improved by means of NOX emission reductions realized through the reduction of natural gas usage.