



## ASIAN CHEMICAL COMPANY LIMITED

### Replacement of Damaged Steam Traps

#### SUMMARY OF THE OPTION

Asian Chemical Co Ltd is located in Bangpakong in Thailand and produces 6,000 tons per year of various copper solution products, namely copper sulfate, copper oxide, copper chloride and etching solution.

The company uses steam as the source of heat for all the processes. The Team noted that three steam traps in the steam distribution system did not work properly and a visible steam plume was seen at several steam traps. Total losses from faulty steam traps were estimated at 60 kg steam/hour (based on sizes of steam traps and steam pressure).

The option was to replace all three damaged steam traps. Following replacement, the steam plumes had disappeared. The three new steam traps cost US\$ 400, annual cost saving was US\$ 6,495 (32,475 l fuel oil @ US\$ 0.2/l) and there were no additional maintenance and operating costs. The payback period was 23 days.

Environmental benefits included:

- Steam savings were 518.4 tons per year (0.06 tons steam lost/hr due to faulty steam traps X 8640 hrs/yr)
- Fuel oil reductions were 32,475 liters per year (135 l/hr X 2.155 tons generated steam/hr X 518.4 tons steam savings/yr)
- GHG emission reductions were 97.4 tCO<sub>2</sub> per year (32,475 liters fuel oil X 0.003 tons CO<sub>2</sub>/l)

Routine investigations of steam traps are needed to avoid energy losses from faulty steam traps in the future.

#### KEY WORDS

Chemicals, Thailand, Steam Distribution & Utilization, Steam Traps

#### FOR MORE INFORMATION

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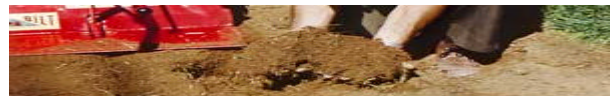
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