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Water Usage Reduction at Food Processing Facility

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Water Usage Reduction at Food Processing Facility

Client: Burke Corporation, Nevada, IA

**Problem Statement**
- Burke Corporation in Nevada, Iowa uses 25% of the city’s fresh water supply.
- The company spends $875,000/yr and uses 65,385,000 gal of water.
- Burke corporation wants to reduce these costs and in turn be more environmentally friendly.

**Objectives**
- Reduce overall water usage.
- Reduce/remove water used to heat 4” sanitary piping.
- Reduce costs associated with water consumption.

**Constraints**
- Operating cost of solution must be less than current condition.
- 3 year payback or less.
- Reliable solution that will not cause downtime.
- Solution must not have a negative effect on production capacity.
- Contaminants must be nonexistent for the food industry.
- Temperature control is essential for pipes running process food.

**Scope**
- Hot water being used to heat 4” sanitary pipe.
- Water used to cool and clean oven.

**Methods**
- Eliminate water usage by heating pipes up via electricity.
- Cost analysis of solutions to fit into 3 years payback.
- Design custom solutions.

**Target Areas**
- Pipe is being heated up via water being dumped onto the pipe.
- Ovens use water to heat up and cool down and also use grease.
- Attempting to reroute water for other uses as opposed to recycling.

**Major Outcomes**
- Max. product throughput before and after (capacity increase if any).
- Estimated annual maintenance cost for solution.
- Annual savings with solution(s).
- Sustainability analysis of solution.
- LOTO write-up on any equipment.
- Recommended spare parts list.
- SOP.
- Preventative maintenance tasks/frequency.

**Benefit to Client**
- Burke Corporation becomes more environmentally friendly.
- Reduce freshwater burden on city of Nevada.
- Reduced cost in water, gas and chemical usage.
- Increased ergonomics of target area.

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