

# 120 Kilograms steam saved daily for the Melter Tank at a confectionery MNC



## Problem

A confectionery MNC in Bangkok, Thailand was experiencing two scenarios in two melter tanks at the gum section:

- 1 Due to the absence of a precise temperature control system, the product temperature was overshooting up to 85 - 90°C (185 to 194°F), exceeding the set point of 80°C (176°F), resulting in a 5 - 10°C (41 - 50°F) deviation, impacting product quality.
- 2 Waterlogged or subcooled condensate was also getting accumulated in the melter tanks.

## Solution

Forbes Marshall conducted an audit and engineered the steam system design for the entire plant. We recommended and implemented the following solutions for the melter tanks at the gum section:

- A PID control valve was installed to avoid temperature overshoots, controlling temperature between +/- 1°C (+/- 33.8°F).
- Steam-operated pump traps (SOPT) were installed to remove waterlogged or subcooled condensate.

Both solutions together aim at effective condensate removal, system safety improvement with increased ease of operation, overall batch time and product quality improvement.



Benefits delivered	
Temperature	controlled within +/- 1°C (+/- 33.8°F) of the set point
Steam savings	120 Kilograms (265 Pounds) per day for two tanks
Annual monetary savings	USD 600 (~THB 19,354 *converted based on exchange rate) for two tanks

