Thainamthip Corporation Ltd

A leading beverage manufacturer in Thailand

The plant was experiencing persistent steam pressure fluctuations between 4-6 barg along the mainline, primarily due to frequent bypass openings caused by a malfunctioning control valve. Additionally, the plant was facing issues of delayed start-ups at the bottlewasher and difficulty in reaching the required process temperatures in the warmer.

Forbes Marshall engineers conducted a detailed plant audit. We identified that steam pressure fluctuations were due to a malfunctioning control valve, while in the warmer, condensate recovery by trap pressure was causing excessive back pressure on the steam trap, leading to frequent bypass openings and failure to achieve the desired temperature set point. The float-type steam trap on the bottlewasher could not fully evacuate condensate during stall, delaying startups and requiring the trap to be bypassed to attain process temperatures. These issues were also leading to localised condensate drainage. We replaced the malfunctioning control valve and upgraded the steam traps. As a result, we achieved a 100% condensate recovery factor, stabilised steam pressure, and reduced water drain losses, significantly improving the plant's operational efficiency.

Benefits Delivered

Steam Reduction	4,164,600 Kilograms/Year
Fuel Saved	308.88 Kilolitres/Year
Water Saved	13,200 Kilolitres/Year
CO_2 Reduction	907,904 Kilograms/Year