

## Energy-saving Opportunities in Edible Oil Plants

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Energy efficiency and product quality are key performance indicators in edible oil processing. Monitoring energy consumption per ton of oil produced, steam-to-fuel ratio, equipment efficiency, Condensate Recovery Factor (%CRF) and lowering production downtime help identify energy-saving opportunities and reduce production costs while maintaining product quality.

***Right steam quality & quantity for optimum productivity:*** Ensuring the right steam quality and quantity is critical in edible oil processing. High-quality steam, free from impurities and with the correct dryness fraction, ensures efficient heat transfer in processes like neutralisation, bleaching, deodorisation, desolventising and distillation, reducing energy losses and maintaining product quality.

***Energy-saving opportunities in the steam circuit:*** Studies have shown a 15~35% gap between the best and average edible oil processing plant. Energy-saving opportunities begin with efficient steam generation and fuel management. Arresting steam losses during distribution, optimising steam utilisation, and recovering and reusing condensate can substantially lower energy consumption and operation costs, while enhancing process efficiency and productivity.

During the presentation some innovative cutting-edge solutions such as energy-efficient boilers, automatic control systems, advanced steam traps, and flash steam recovery units will be discussed. These solutions not only reduce energy consumption but also enhance productivity and ensure precise control of critical processes, driving higher output and reduced costs. A few examples that highlight the tangible benefits of energy conservation initiatives will be presented to achieve significant savings in edible oil plants.