Energy Conservation in Milk Processing Plants

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Abstract

Milk processing plants utilize both fossil fuel energy and electrical energy. In recent years, there has been considerable interest in efficient utilization of energy in these plants. The reasons for this include the need to reduce energy cost in individual plants, the energy import bill for energy importing countries, the rate of depletion of non-renewable energy resources and the adverse environmental impact associated with energy use. The following processes are important in milk powder plants: steam generation, steam distribution, condensate recovery, refrigeration, milk pasteurizing, milk evaporation, milk drying and cleaning. Of these processes, only evaporation and drying are not found in fluid milk plants. In this paper, ways of saving energy in each of the above processes are discussed.