Thesis Title	A study of Energy Reduction in Steaming Process of Noodle Manufacturing
Thesis Credits	12
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Program	Master of Engineering
Field of Study	Mechanical Engineering
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Faculty	Engineering
B.E.	2554

Abstract

This research was aimed to reduce energy consumption during noodle steaming process at Thai Asia Rice Product Company. The study focused on the effects of starch inlet temperature and belt speed on the required leading time of the steaming process. The current process, which operates on the belt 15 meters in length at the speed of 6 m/s was replaced by the belt 3 meters in length and the starch inlet temperatures of 35, 40, 45, 50, 55 and 60 °C. The belt speed was also varied to obtain the suitable operating for noodle steaming process. The results show that the energy consumption could be reduced by one-third of the current process, while the quality and capacity of the process could be maintained. An increase in the steaming temperature seems to increase the production rate, while reducing the overall energy consumption. The maximum production rate of 907.2 kg/h could be obtained at the starch temperature of 60 °C with the same certified quality of the company. Thus, the energy consumed by the electric motor could be reduced by up to 62.3%.

Keywords: Energy reduction/Steaming/Noodle/Steam