

Nipas Leenatham 2010: An Improvement of Tensile Force in the Packaging Seal Process via Design of Experiments. Master of Engineering (Industrial Engineering), Major Field: Industrial Engineering, Department of Industrial Engineering.

Thesis Advisor: Associate Professor Prapaisri Sudusna-na-Ayudhya, Ph.D. 112 pages.

The objective of this research work is to find appropriate parameters setting to gain higher tensile force in the packaging seal process according to the required standard. From an observational study of the problems in the process, it was found that the critical problem was weak sealing of packaging, which led to the damage of the product inside. The 2^k Factorial design was used as a screening experiment to find significant factors. It was found that the conveyor speed, pre-heat temperature, forming temperature and sealing temperature significantly affect the tensile force at the confidence level 0.05. After the improvement, the tensile force was higher than the required standard and the packaging seal process had zero non-conforming part.

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Thesis Advisor's signature

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