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WORAPONG KHOONIN : THE FEASIBILITY STUDY ON LAUNDERING BY
USING ULTRASONIC WAVE. THESIS ADVISORS : SOMPONG TONGCHAI, M.Sc.,
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This research was a feasibility study on laundering by using ultrasonic wave. The purpose of this thesis was to study and analyze the physical and chemical properties of impurities on garments, and to develop and build an ultrasonic wave laundering device. The ability of this invention to clean the impurities that stick to garments was tested in terms of effectiveness, performance and efficiency. The sample group consisted of 120 normal garments representing 6 different types of garments. Before the laundering process, a thin film of perspiration and dust was deposited on the clothes. After laundering, data from detergent laundering and ultrasonic wave laundering were compared by analyzing by t-test.

The findings of this study showed that the effectiveness of this ultrasonic wave laundering method was the same as that of detergent laundering method. The values of color change tensile strength, shrinkage percentage and appearance after laundering were not different at 0.01 significance. The waste water from the two laundering methods, however, did have difference properties. The waste water of detergent laundering method was of low quality level. The two laundering methods were not different in effectiveness, performance and efficiency at 0.01 significance value . This demonstration showed that the results of the two laundering methods were equivalent and laundering by using ultrasonic wave was feasibility.