Nalisa Sayasonti 2009: Ultrasonic Welding. Master of Engineering (Electrical Engineering), Major Field: Electrical Engineering, Department of Electrical Engineering. Thesis Advisor: Associate Professor Chaiwat Chaikul, M.Eng. 74 pages.

This research is a study of Piezoelectric material and ultrasonic plastic welder invention. This plastic welder utilizes the property of piezoelectric to convert electrical power from AC-generated circuit to mechanical power for sealing small plastic pieces.

This research studies from Piezoelectric material preparation, Piezoelectric transducer production, 60 KHz 55W oscillator circuit design, and integration as Piezoelectric handheld plastic welder.

The result exhibits that the specimens have Piezoelectric property and as integrated as welding tool can seal plastic pieces with thickness between 0.06 mm and 0.24 mm completely.

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