



Thesis Title	The Study of Hardfacing Wear to Estimate the Lifespan Affected by Various Hardfacing Electrode
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### **Abstract**

This thesis studied the wear of the hardfacing electrodes welding the flat clay mixing. It was expected that the appropriate hardfacing electrode could increase the lifespan and reduce the refund.

This experiment followed DIN855 standard using the hardfacing electrode group6, group10, and group21. All of the have 4.00 mm in diameter. Besides, the 4 types of the bead pattern such as square grid, dots, trapezoid grid and parallel bead had been tested. The sand content in the fat clay was around 52.40-54.42%. The wear of the hardfacing electrode welding layer was calculated from the weight-loss of the cutting tools after using

The suitable hardfacing electrode, increasing lifespan and reducing refund was group10 in DIN8555. This hard facing electrode composes of carbon 4.40% Silicon 1.30% Manganese 0.60% chromium 23.70% Niobium 5.50% Vanadium 1.50% Tungsten 2.20% Molybdenum 6.50% The best bead pattern for minimum wear was the trapezoid grid type.