

# EFFECT OF ELECTRODE ORIENTATION ON THE PROFILE OF VERTICAL POSITION WELDING PROFILE QUALITY WITH SMAW WELDING

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## ABSTRACT

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Abstract

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The objectives of this study are 1) Knowing the orientation of the electrode to the height and width of the weld joint profile, 2) Knowing the effect of electrode orientation on the large distortion of the weld joint, and 3) Knowing the type of electrode orientation that produces a standard weld connection profile shape and which can eliminate distortion services. ..

This research includes experimental research. The object of this research is AISI 1025 carbon steel. Carbon steel has good isotropic properties and homogeneity so that 3 samples of each treatment are sufficient. The data collection method uses a welding result assessment instrument and a welding gauge measuring instrument. The results showed: 1) The orientation of the electrodes affects the height and width of the weld joint profile, 2) The orientation of the electrodes has an effect on the distortion of the weld joint, and 3) The orientation of the electrodes which results in a standard weld profile is whipping technique for root pass, Z weaving technique. for the cover pass, and a combination of whipping root pass and Z weaving techniques for the cover pass can eliminate the incidence of distortion

Kata Kunci: *ELECCTRODE ORIENTATION*