

# A STUDY ON NOZZLE WEAR MODELING IN ABRASIVE WATERJET CUTTING

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## TÓM TẮT:

This paper introduces a study on modeling of the wear of composite carbide nozzles in Abrasive Waterjet (AWJ) cutting. The model was built based on many long-term wear test data. In the model, the effects of jet-parameters such as water pressure, abrasive mass flow rate, orifice diameter, and initial nozzle diameter were taken into account. The model can be used for calculation the nozzle lifetime and therefore used for programming the AWJ cost optimization problem. Through the analyzing of the model, the effects of above parameters on the composite carbide nozzle wear were also more understood.