MATHEMATICAL MODEL ABOUT THE TRAVELING WAVE ULTRASONIC PIEZOELECTRIC MOTOR

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Abstract. The paper presents a mathematical model for a traveling wave ultrasonic motor which offers the possibility to estimate the rotor velocity, the efficiency and also is useful to analyze some function characteristics. Generally, a mathematical model is useful for understanding the principles of energy transfer at the frictional interface and also for the simulation of the overall system behavior as well for the optimization of design parameter or operational characteristics.

Keywords: traveling wave ultrasonic piezoelectric motor, mathematical model.