Behavioral MatLAB Model of a Vibrating Wire Transducer

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Abstract

This article wants to reveal a new method to measure and moderate a vibrating wire transducer. Combining a complex measuring procedure that includes data acquisition and a MatLab application, it is possible to calculate the transducer's impedance. Furthermore, measuring frequencies around the transducer's own resonance, the technique above evaluates correctly some parameters that where previously unavailable and also calculates the impedance's real and imaginary parts. The above processes are fully automated under MatLAB platform so the transducer's impedance to be efficiently calculated.