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FUNDAMENTAL SOLUTIONS IN TWO-DIMENSIONAL ELECTROELASTIC PROBLEMS UNDER MOVING OSCILLATING SOURCES

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The plane and antiplane problems of concentrated point sources oscillating and moving with constant velocity in piezoelectric media are studied. The explicit representations of fundamental solutions are obtained by using Fourier integral transform techniques for all rates of source motion. The dynamic and quasistatic components of the solutions are extracted. The stationary phase method is applied to derive an asymptotic at the far wave field. The kinematic and energetic analyses are presented too.

Keywords: piezoelectricity, fundamental solutions, moving oscillating source, far field, wave energy.

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