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Propagation of an acceleration wave in layers of isotropic solids at finite temperatures.

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Summary: The propagation of an acceleration wave in a layered solid which consists of different isotropic solids in contact with one another is studied in the case of plane symmetry. Each isotropic solid is at a finite temperature. The amplitudes of transmitted and reflected waves in each layer are determined and the critical time when the incident wave breaks down is discussed. As an illustrative example, an acceleration wave in a semi-infinite solid embedded with a thin layer is analyzed and discussed in detail.

MSC:

[74F05](#) Thermal effects in solid mechanics

[74J30](#) Nonlinear waves in solid mechanics

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