

**Blagoveshchenskij, A. S.**

**Inverse problems of acoustics in a moving medium.** (Russian) Zbl 0599.76091  
Probl. Mat. Fiz. 11, 46-58 (1986).

Problems of determination of characteristics of a medium and the velocity of its motion are studied on the basis of data on an acoustic field in the medium. It is assumed that the medium is in a stationary state and is described by functions depending on only one Cartesian coordinate.

Two cases are considered: 1. The medium is lamellar and the velocity  $V(z)$  for each  $z$  is perpendicular to the  $z$ -axis. 2. One-dimensional problem. The flow in the medium is parallel to the  $z$ -axis. Also the acoustic waves propagate along the  $z$ -axis, i.e., the corresponding functions describing the acoustic field depend on only  $z$  and  $t$ .

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**MSC:**

76Q05 Hydro- and aero-acoustics  
35R30 Inverse problems for PDEs

**Keywords:**

determination of characteristics; acoustic field; stationary state; One- dimensional problem