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**Scattering of acoustic waves from a point source over an impedance wedge.** (English)

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**Summary:** In this work we study diffraction of a spherical acoustic wave due to a point source, by an impedance wedge. In the exterior of the wedge the acoustic pressure satisfies the stationary wave (Helmholtz) equation and classical impedance boundary conditions on two faces of the wedge, as well as Meixner's condition at the edge and the radiation conditions at infinity. Solution of the boundary value problem is represented by a Weyl type integral and its asymptotic behavior is discussed. On this way, we derive various components in the far field interpreting them accordingly and discussing their physical meaning.

**MSC:**

76-XX Fluid mechanics

35-XX Partial differential equations

**Keywords:**

acoustic diffraction; point source; impedance wedge; Sommerfeld-Malyuzhinets technique; far-field asymptotics

**Full Text:** DOI

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