

PROPAGATION OF SHOCK WAVES IN REAL UNIFORM GAS ATMOSPHERE

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Abstract

The Whitham method has been used to study the propagation of shock waves for two cases (i) when medium is real gas and (ii) it is ideal gas. The obtained expansions are computed and discussed through tables and graphs. The dependence of mach number on propagation distance, Pressure, Particle velocity and shock velocity as well as on adiabatic index has also been analyzed for both the cases. In the last comparison between the results obtained here are made mutually as well as with those obtained by other methods.

Keywords : Shock wave, Whitham's method, real gas, and ideal gas.