

## عنوان مقاله:

Visualization of Shock Wave Phenomenon around a Sharp Cone Model at Hypersonic Mach Number in a Shock Tunnel using High Speed Schlieren Facility

## محل انتشار:

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## خلاصه مقاله:

The flow field around a Sharp cone model configuration has been investigated by means of Schlieren facility in hypersonic shock tunnel. The time dependent evolution of flow around a cone of angle  $11.3^\circ$  with base radius of 150mm has been visualized for a flow Mach number  $M = 6.5$ . Experiments have been carried out with Helium as driver gas and air as test gas to visualize the hypersonic flow field. The flow establishment, steady state, and termination process of the hypersonic flow have been visualized for two different angles of attack, namely  $0^\circ$  &  $5^\circ$ . Experimentally measured shock angle compares well with the theoretical and the computational study. The measured shock layer thickness compares well with the numerical simulation for both angles of attack.

## کلمات کلیدی:

Sharp Cone model, High speed Schlieren facility, Hypersonic shock, Tunnel, Shock layer thickness

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1369744>

