


[DOWNLOAD](#)


Measurement of Initial Conditions at Nozzle Exit of High Speed Jets

By -

BiblioGov. Paperback. Book Condition: New. This item is printed on demand. Paperback. 22 pages. Dimensions: 9.7in. x 7.4in. x 0.1in. The time averaged and unsteady density fields close to the nozzle exit ($0.1 \leq x/D \leq 2$; x : downstream distance, D : jet diameter) of unheated free jets at Mach numbers of 0.95, 1.4, and 1.8 were measured using a molecular Rayleigh scattering based technique. The initial thickness of shear layer and its linear growth rate were determined from time-averaged density survey and a modeling process, which utilized the Crocco-Busemann equation to relate density profiles to velocity profiles. The model also corrected for the smearing effect caused by a relatively long probe length in the measured density data. The calculated shear layer thickness was further verified from a limited hot-wire measurement. Density fluctuations spectra, measured using a two-Photomultiplier-tube technique, were used to determine evolution of turbulent fluctuations in various Strouhal frequency bands. For this purpose spectra were obtained from a large number of points inside the flow; and at every axial station spectral data from all radial positions were integrated. The radially-integrated fluctuation data show an exponential growth with downstream distance and an eventual...



READ ONLINE
[1.65 MB]

Reviews

An extremely wonderful book with lucid and perfect information. It is one of the most awesome publication i have read. Your life period will probably be enhance the instant you total looking at this pdf.

-- Prof. Dan Windler MD

It is really an amazing publication i actually have at any time read. It is really simplistic but unexpected situations inside the 50 percent of your pdf. Its been written in an exceptionally simple way in fact it is just right after i finished reading this ebook where actually transformed me, alter the way i really believe.

-- Dr. Celestino Spinka III