Abstract

Pressure-Sensitive Paint (PSP) is the optical pressure measurement technique based on the photochemical reaction of the oxygen quenching of the phosphorescence dye in the paint. PSP has initially developed to measure global pressure distribution on an wing model with high spatial resolution without disturbing flow. Nowadays, PSP is rapidly developing to realize the unsteady pressure measurement over 10 kHz with high accuracy. It widens the range of applications of PSP. This paper introduces the basis of PSP technique and its application.

Keywords: Pressure-Sensitive Paint (PSP), Molecular sensor, Oxygen quenching, Phosphorescence, Optical measurement