

EXPERIMENTAL STRESS ANALYSIS

Basic elasticity theory. Strain Measurement Methods: Various types of strain gauges, Electric Resistance strain gauges, semiconductor strain gauges, strain gauge circuits, transducer applications, recording instruments for static and dynamic applications.

Photoelasticity: Theory of photoelasticity, Analysis techniques, Three dimensional photoelasticity, Reflection Palanscope and application.

Brittle coating methods of strain indication. Grid method of strain analysis. Computer interfacing and on-line monitoring of strain and stress fields.

Text Books:

1. Experimental Stress Analysis – J. W. Dally and W. F. Riley. Mc GrawHill, 1965.

Reference Books:

1. Experimental Stress Analysis and Motion Measurement – R. C. Dove and P. H. Adams. PHI, 1965.
2. Applied Stress Analysis – A. J. Durelli. PHI, 1970.