

AMMI-27 EXPERIMENTAL STRESS ANALYSIS

1. Importance of experimental methods, similitude laws and design of experiments, some simple measuring instruments
2. Bagg's deformer. Strain gauges-principles and applications
3. Mechanical, optical and electrical strain gauges; semi-conductor strain gauges; strain recording instruments
4. Photo-elasticity-two dimensional stress analysis, principles and applications, Moir's techniques, three dimensional stress analysis
5. Non-destructive testing, Brittle coatings. Some application of experimental stress analysis and research, design and field problems 8

Reference Books:

1. Obert & Duall, Rock Mechanics and design of structures in rock. Pub: John Willey & Sons
2. Railey & Dalley, Experimental stress analysis. Pub: McGraw Hill Book Company
3. Vutukuri & lama, Handbook of Mechanical properties of rock Vol.I&II. Pub: Transtech,Germany.

