

Mechanical Measurements and Metrology - Video course

Mechanical measurements: (S.P. Venkateshan)

1. Introduction to measurements, Errors in measurements, Statistical analysis of data, Regression analysis, correlation, estimation of uncertainty and presentation of data, design of experiments.
2. Measurement of field quantities like temperature, pressure, velocity by intrusive and non-intrusive techniques under various conditions met with in practice like steady and transient conditions.
3. Measurement of derived quantities like heat flux, volume/mass flow rate, temperature in flowing fluids.
4. Measurement of thermo-physical properties, radiation properties of surfaces, vibration and noise.
- s. Computer assisted data acquisition, data manipulation, data presentation.

Metrolo2V: (M.S. Shanmugam)

1. Measurement of length, measurement of angle
2. Limits and fits
3. Measurement of geometric forms, straightness, flatness, roundness etc. Mechanical and optical methods.
4. Measurement of screw threads and gears.
5. Measurement of surface roughness and texture
6. Introduction to CMM. In-process gages.
7. Inspection and quality monitoring.



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**Mechanical
Engineering**

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