Product Name : Product Code : Stress And Strain Analysis on A Membrane TN188



Description :

Stress And Strain Analysis on A Membrane

Technical Specification :

Stress And Strain Analysis On A Membrane The unit is perform the following experiments and investigations:

Learning Objectives / Experiments: Measure radial and tangential strain using strain gauges Measure deflection using a dial gauge Calculate the stresses from the measured strains: radial stress, tangential stress Determine direction of principal stress Application of mohrâ€[™]s strain circle to determine the principal strains Fundamental principle: using strain gauge technology to measure strains

Supplied with; Multi-channel measuring amplifier PC1 Computer-System with 21" TFT-Monitor Win 10 engl.

Specifications:

- [1] investigate the deflection and strain of a thin disk under compressive load
- [2] strain gauges measure in the radial and

[3] direction

[4] strain gauge configured as half-bridge

[5] possible to measure the deflection at any radius [6] measure the deflection [7] adjustable dial gauge, scale indicates position along the radius [8] hermetically sealed hydraulic system, maintenance-free, for [9] the compressive load [10] hydraulic system with hydraulic pump and manometer [11] with the supplied measuring amplifier [12] software for analysing measured values in the amplifier supplied **Technical Data** Aluminium disk Outer diameter: Ã~=230mm Diameter used in the experiment: Ã~=200mm Thickness: 3mm Strain gauge application 8 strain gauges: half-bridges, 350 Ohm Gauge factor: 2,00 ±1% Power supply: 10v Dial gauge 0...20mm Graduation: 0,01mm Manometer 0...1bar Accuracy: class 1,0 System pressure 0,6bar **Dimensions and Weight** Length x Width x Height: 700x350x350mm Weight: 25kg Multi-channel measuring amplifier Amplification and display of signals from strain gauge measuring points Processing of measured values on computer Evaluation of stress and strain analysis experiments, Evaluation of experiments relating to forces Specification: [1] multi-channel measuring amplifier for processing of strain gauge signals [2] strain gauge connection in half or full bridge configuration [3] strain gauge connection via 68-pin input port [4] automatic tare of measured values [5] processing of measured values directly in the measuring amplifier or using the supplied software on a PC [6] integrated software for experimental units on stress and strain analysis [7] software for data acquisition via USB under Windows 7, 8.1, 10 including PC1 Computer-System with 21" TFT-Monitor Win 10 engl. **Technical Data:** Amplifier Number of input channels: 16 Strain gauge connection in half or full bridge configuration Resistance: min. 350 ohm/strain gauge

Input voltage: max. ±32mV

230V, 50Hz, 1 phase 230V, 60Hz, 1 phase; 120V, 60Hz, 1 phase Dimensions and Weight Length x Width x Height: 230x200x120mm Weight: 2kg.

Naugralabequipments

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