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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 Â±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
Strain gauge supply voltage: Â±5vdc
Input voltage: max. Â±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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