

Lightnin Lab Procedure

Title: Strain Gage Telemetry System Installation and Operation

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Version	Date	Comments
1.0	11-10-15	First Issue

Description

The purpose of this document is to detail the installation of a telemetric strain sensing system for impeller stress testing and development. The procedure is split into three sections to assist the user through initial installation, transfer from one impeller to the next and data logging. This manual intends to provide a substantive basis from which the designed system may be configured and installed without any prior knowledge of its operation and with only the given materials at hand. The desired result is an outputted CSV file which contains the differential outputs of four half-bridge sensor pairs over a predetermined period.

(i) Assembly Instructions

(ii) Gauge Installation Instructions

(iii) Operations Manual

Created By

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Equipment List

Test Impeller/Motor

Strain Testing Rig

Lord Microstrain V-Link LXRS receiver and appropriate cables

Computer with V-Link Software

Resources

Lab technician

Reference Documents

Strain Testing Rig Assembly Manual

Strain Testing Rig Installation Manual

Procedure

1) If testing rig is not assembled, build per instructions outlined in **Strain Testing Rig Assembly Manual**.

2) Install testing rig as outlined in **Strain Testing Rig Installation Manual**.

3) Open [SOFTWARE] on dedicated computer.

4) Calibrate using the following steps:

[CALIBRATION PROCEDURE]

5) Select duration of test period to record.

6) Click Start, begin test.

7) Once data has been collected, choose location to save file.

Acceptance/Validation Criteria

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Appendices