**OPERATING GUIDELINES FOR AXIAL TORSION**

**BASIC DETAILS -**

1. Maximum capacity : Torsion- 500Nm, Axial-100kN,

2. Loading Configuration : Tensile, Torsion with Tensile, Torsion with Compression

3. Displacement movement : +/-80mm

4. Sample type : Round or threaded, & Flat Sample

5. Sample Dimension (Max) (Min)

1) Round threaded

a) Length 300mm 92mm

b) Diameter 25mm 3mm

2) Flat Sample

a) Length 300mm 92mm

b) Thickens 18mm 0mm

**SAMPLE PREPARATION & TESTING PROCEDURE –**

1. Prepare the sample as per ASTM standard
2. Mount the sample using suitable wedges
3. Calibration the load cell as per the shunt value
4. Select the crosshead speed as per required test rate
5. Select the temperature as per the required test conditions
6. Set the test speed rate &DAQ HZ rate as per the test required
7. Test the sample up to 500Nm for torsion &100kN for axial to the load to fracture if required
8. Remove the failed specimen from the wedges after test is over.

**FOR COMPUTER DATA & CHART-**

1. Select the DAQ report test file open the raw data
2. Open the raw data in excel sheet & make arrange the chart and data
3. Excel file save in correct computer location

**TROUBLE SHOOTING-**

1. In case of any abnormal condition with machine **Press Red E Stop** button on front of machine
2. Do not touch the machine & induction coil when test is running
3. When start the test set limits load, torsion & displacement.

**TEST COUNDUT IN AXIAL TORSION**

1. Tensile room temperature test
2. Tensile induction coil test up to 900c
3. Torsion-Tensile room temperature test
4. Torsion-Tensile induction coil test up to 900c
5. Torsion-Compression test
6. Compression test
7. Torsion test
8. Fatigue test

**NOTE-**Fatigue test conduct up to -20kN Compression load Olney

