FULLY-EQUIPPED SHOCK AND VIBRATION TESTING CENTER

*Medium Weight Shock Machine (MWSM) *Electrodynamic Shaker *Three Axis Hydraulic Durability Testing Rig *Axial and Torsional Elastomer Characterization Frames *Climatic Test Chambers *Three Axis Coordinate Measuring Machine *Laser Scanner *DAQ Systems

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IATF 16949

ISO/IEC 27001

TS EN ISO/IEC 17025

TEKNO KAUÇUK SANAYİİ AŞ

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TEKNO KAUÇUK

TEST YOUR LIMITS!

with TEKNO

SHOCK AND VIBRATION TEST CENTER

TÜRKAK Test TS EN ISO/IEC 17025 AB-1064-T

• Our Test Center has been approved by TS EN ISO/IEC 17025:2017 standarts in MIL S 901D & MIL S 810 F/G tests.

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LABORATORY CAPABILITIES

Vibration Testing
> Sinusoidal Vibrations
- Frequency Sweep
- Step Sine

> Random Vibrations
- Random
- Sine on Random
- Random on Random

Shock Testing
> Classical Shock Profiles
- Half-Sine Pulse
- Sawtooth Pulse

> Shock Response Spectrum (SRS) Based Testing

Climatic Testing
> Temperature Controlled
> Humidity and Temperature Controlled

Elastomer Characterization Testing
> Static Characterization

> Dynamic Characterization

> High Frequency Characterization

> Torsional Static Characterization

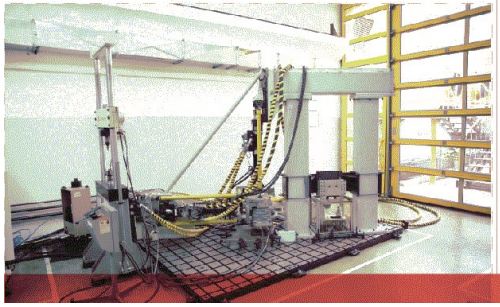
Durability Testing
> Single-Axis Sinusoidal
> Single-Axis Road Load Data
> Multi-Axis Sinusoidal (max. 3 axes)
> Multi-Axis Road Load Data (max. 3 axes)

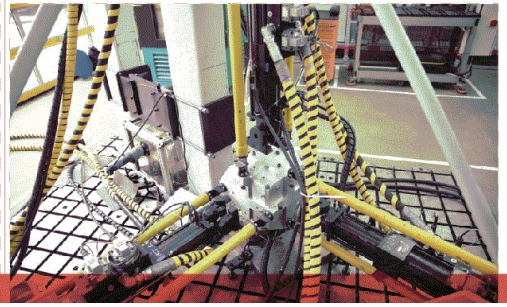
• Durability Testing can be made under temperature controlled conditions.

Structure-Borne Noise Measurement

Air-Borne Noise Measurement

Three-Axis Dimensional Measurements





TEST SYSTEMS

Electrodynamic Shaker
Brand: Spectral Dynamics
Frequency Range : 5-2800 Hz
Max. Load (Shock) : 7600 kgf
Max. Load (Vibration) : 3800 kgf
Max. Displacement : ± 25.5 mm
Max. Velocity : 2 m/s
Max. Acceleration (Shock) : 100 g
Max. Acceleration (Vibration) : 50 g

Medium Weight Shock Machine (as described in MIL-S-901D standard)
Max. Payload : 2000 kg

Hydrodynamic Elastomer Characterization Frame
Brand: MTS
Frequency Range : max. 200 Hz
Load Range : ± 50 kN
Displacement Range : ± 60 mm

Hydrodynamic Actuators
Brand : MTS (medium size x3)
Frequency: max. 100 Hz
Force Range: ± 50 kN
Displacement Range: ± 75 mm

Brand : MTS (large size x1)
Frequency : max. 10Hz
Force Range : +442 kN, -648 kN
Displacement Range : ± 250 mm

Servo-Electric Torsional Testing System
Brand : Zwick Roell
Torque Ranges : ± 20 Nm and ± 200 Nm (accuracy: %1)
Angular Displacement Range: ± 36000°
Angular Velocity Range: 0.036 – 32400 °/min

Climatic Testing Chambers
Brand : Weiss Techknik
Interior Dimensions: 900/1100/1500 (mm) (w/d/h)
Interior Dimensions (/w External Chamber): 1620/1350/2500 (w/d/h)
Temperature Range: -70°C ; +180°C
Temperature Rate of Change : max. 3 °C/min

Brand: Angelantoni
Interior Dimensions: 1000/1505/1020 (mm) (w/d/h)
Temperature Range: -40° C ; +150° C
Temperature Rate of Change (max): 3° C/min

DAQ Systems
Brand: Dewesoft
2 Modules
16 Analog Input Chanels
2 Digital Input Chanels
24 Bit, 200kHz Data Acquisition
Modal Testing and SRS Calculation Capability

Brand: 01dB
4 Modules
12 Input Chanels
16 Bit, 25.6kHz Data Acquisition

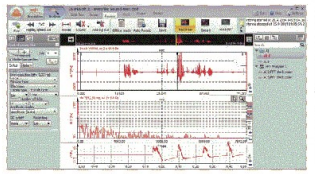
Air-Borne Noise Spectrum Analyzer
Brand : Brüel & Kjaer
1/1 or 1/3 Octave Band
Wide Band Frequency Range : 3 Hz - 20 kHz

CMM 3 Axes Coordinate Measurement Machine
Brand : Leader
Measurement Range: 700/1000/700 (mm) (w/d/h)
Prob (Renishaw) Accuracy: 0.03 mm
Lazer Scanner Probe

TEST STANDARDS

> MIL-STD-810F/G and 810G w/Change 1

Method 501.4/5 High Temperature
Procedure 1 (Storage)
Procedure 2 (Operation)



Method 502.4/5 Low Temperature
Procedure 1 (Storage)
Procedure 2 (Operation)

Method 507.4/5 Humidity
Procedure 1 (Induced)
Procedure 2 (Aggravated)

Method 514.5/6/7 Vibration
Category 4, 7, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20, 21, 22, 24

Method 516.5/6 Shock
Procedure 1, Terminal Peak Sawtooth, SRS
Procedure 5, Terminal Peak Sawtooth, SRS

Method 528.1
Environmental Vibration

> MIL-S-901D / BV043 / STANAG 4141
High Impact Shock Testing with MWSM

> MIL-S-167/1
Mechanical Vibrations of Shipboard Equipment

> IEC-60068-2-6
Vibration-Basic Transportation Test

> IEC-60068-2-27
Mechanical Shock

> EN 61373
Shock and Vibration Tests

> ISO 16750-3
Road Vehicles
4.1 Vibration
4.2 Mechanical Shock

> RTCA DO-160G
Environmental Conditions and Test Procedures for Airborne Equipment
Section 7, Category A
Section 8, Category R, Curve I