MAUL-THEET

Vibration & Test Solutions

문의: 라홍섭 대표
010-3420-1164
s.lah@maul-theet.co.kr
Company

Location

- Berlin / Germany

Team

- Mechanical Engineers
  - Structural Dynamics
- Software Developers
  - Application Development
  - Hardware Integration
- Freelancer
  - Engineers & Programmers
- Sales & Admin
  - Business Development
  - Administration
History

• **Maul-Theet Systeme**
  - 1988 - 2001
  - Software development & consultancy

• **Maul-Theet Systeme & Brüel&Kjaer**
  - 2001 - 2009
  - Development of standard software & customer projects

• **HGL Dynamics GmbH (& Maul-Theet Systeme)**
  - 2009 - 2012
  - Development of own products
  - Sales of own products and HGL-Group products

• **MAUL-THEET GmbH**
  - 2013...
  - Development of standard products and test stands
  - Software Development
  - Representation of HGL Dynamics Ltd. in GERMANY
Expertise

Structural Dynamics
- Modal Analysis Software
- OMA Distributor
- FEM Consultant

Vibration Measurement
- Analyzer Software
- Sensors
- Laser Scanner

Noise Measurement
- Third Octave Analyzer Software
- Sound Intensity
Business

Standard Products
- ScanSet
- vImpact
- vModal, vAnalyzer
- vDamp Test Stand

Customized Solutions
- Vibration Test Stand (VTS)
- Air Flow Test Stand (ATS)

Software Development
- Hydroacoustic
- Consulting
  - Measurements
  - Training, Seminars
  - Calculation
Data Acquisition and Software
ScanSet

[ScanSet + SinglePoint Laser = Scanning Laser]

- Works with all available SinglePoint Laser
- Existing/Old SinglePoint Laser can be reused
- Extremely competitive pricing
- High-tech Innovation Made in Germany
vImpact

Automatic Modal Hammer

- No Double Hits
- Excitation up to 40 kHz
- Highest Reproducibility
- External Controllable

- New Mid Range Hammer
vModal & vAnalyzer

Structural Dynamics Solution

- Integrated Solutions
- vAnalyzer
  - FFT, FRF, Coherence
  - Recorder Function
- vModal
  - Experimental Modal Analysis
  - Operating Deflection Shapes
- Free Viewers
- Operational Modal Analysis (OMA)
- Portable Systems with Data Acquisition via USB and Ethernet
Damping Test Stand

- Automatic damping estimation
- Temperature Range -30° to +140°
- Frequency Range up to 20 kHz
- Excitation with automatic Hammer
- No contact vibration measurement
- In compliance with
  SAEJ 3001
  EKB 1110
Vibration Test Stand

QC Test Stand for Frequency Screening on Compressor and Turbine Blades

- Development of Hardware and Software
- Hydraulic clamping up to 650kN
- Simple operation for blue collar worker
- Highest Accuracy
Air Flow Test Stand

QC Airflow Tests Stand for Turbine Blades

- Development of Hard- and Software
- Turbine Blades and Burners
- Using Sonic Nozzles
- Highest accuracy
Hydro Acoustics

Hydro Acoustic Measurements of Ships and Submarines
  • Pass-by Measurements
  • Transient Analysis
  • Beamforming

  • Measurement Network and Data Management
    • Multi – Client Real Time Analysis
    • Data Server with Playback Function
Hydro Acoustics

Measurement Network

PULSE Frontend

Patch Panel 2

AUX Channel Server
- Global Events
- GPS
- Audio Comments

Client

Client

• Global Database

H11...H15

H21...H25

H31...H35
Operating Modal Analysis (OMA) on turning brake disks

- Determination of modal parameters under operation
- As a function of different parameters like clamping force, temperature, etc.
Vibration monitoring for Tuned Mass Dampers (TMD) in the Dubai Frame

• 2 DAQ-systems with 9 measurement places
• Permanent vibration measurement and data storage for the last month
• Remote Access by Internet
• MEMS accelerometers or velocity geophones
Customer Projects

Development of an XY-Robot-System for Oil-Painting Scanning

• Development of a software to create the scan geometry, to automatically do the measurements, to evaluate and manage result data
• Determination of aging status of the oil paintings using vibration and system analysis
Customer Projects

Overlay SLDV + Sound Intensity

- Overlay of mapping of
  - Sound Intensity
  - Scanning Laser Doppler Vibrometer
Customer Projects

Development of a Software for „pressure mapping“ in an acoustic wind tunnel

- Measurement of static pressure on the car surface using 128 measurement channels
- Surface Geometry, Measurement, Data Management
- Display of Pressure Maps
Scanning & Single Point Laser Doppler Vibrometer

- Compact & portable complete systems
- 4 to 32 Channel Systems with 24 bit ADC, Antialiasing-Filter, ICP
- Collimated, no focusing necessary
- Integrated Modal Analysis Option
- 3D-Animation
- Easy to use
Consulting

- Vibration measurements & calculations
- Modal Analysis, ODS and OMA
- Structural dynamics consultancy & design
- Static and dynamic FEM-calculations
- Acoustic measurements
- Customer specific software development
- Training, seminars, support
- Test stand development
- Comprehensive stock of measurement equipment
References