Wölfel

Measurement, Analysis and Assessment of Building Vibrations

Get a grip of what's going on

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MEDA is a complete system to measure, analyse and assess mechanical vibrations, shocks and noise. No matter whether you have to assess construction works, traffic-induced vibrations, vibrating machines or blasts MEDA helps you get a grip of what is going on.
Has a threshold be exceeded? How good are the vibration attenuation measures? MEDA answers these and further questions by means of its extensive measurement, analysis and assessment capabilities.

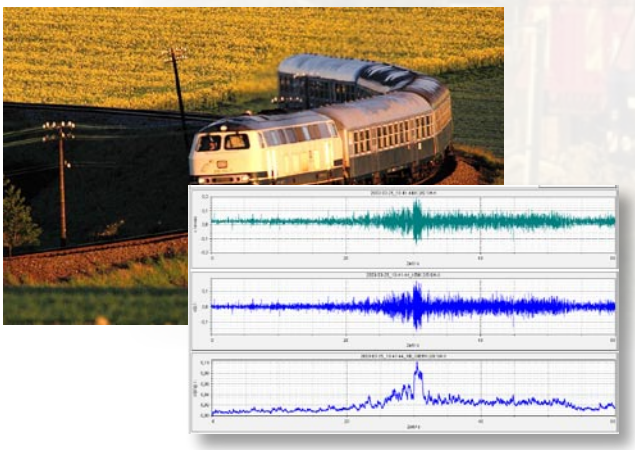
MEDA provides a wide range of tools for your shock & vibration measurement campaigns. A plethora of parameters can be defined by the user to configure a specific measurement.
MEDA is a combination of both software and hardware. Individual components have been submitted to a stringent selection process and are tuned to optimally work with each other. **MEDA** re ects our experience in long-term measurement.

Overview of the most important features

SYSTEM	
Number of channels	4 - 8
Resolution	12- or 16-bit
Mode	serial
Antialiasing filter	optional
ICP supply	optional
AC coupling	optional
PC or Notebook with PCMCIA socket (type II)	✓

The most important measurement features (excerpt)	
Time-series measurement	✓
Result	Time series/spectrum and phase/time series, spectrum and phase
Online visualisation of all channels	parallel
Online spectrum	✓
Average spectrum	✓
Auto-Range	✓
Oszilloscope function	✓
FFT-Window	Hanning, flat-top, rectangular
Measurement band width	0,1 Hz – 40 kHz
Maximum number of FFT-lines	26 Millons
Start of measurement	Manual, TTL-triggered, STA/LTA-triggered, threshold
Stream on disk	single event, cyclic, series of measurements
Trigger logic	AND, OR, XOR, user-defined using *.DLL
Averaging	linear (average spectrum)
Alarm on threshold exceeding	2 definable alarm levels, email notification
Visualisation of overflows	✓
RPM input	external analog or impulses
CAN-Bus	external

Passing by of a train



Monitoring of construction sites

Measurement and assessment with 1 up to 64 channels

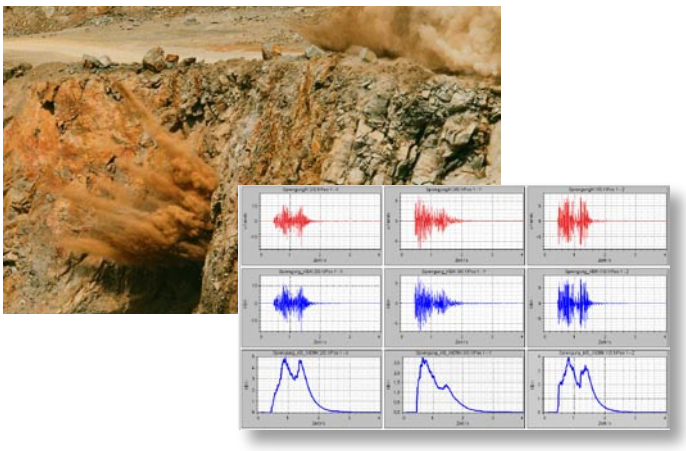
The most important features for analysis and documentation (excerpt)	
Project-specific data management	✓
Automatic documentation of all settings and signal characteristics	✓
Assessment according to	DIN ISO 10816, VDI 2056, ISO 2631, DIN 45671, DIN 4150, ÖNORM S 9012, user-defined
Offline edition	more than 50 mathematical functions, for instance: digital filters, integration/differentiation, spectral power density, division/multiplication, third-octave spectrum, octave band spectrum, sound-level meter functions, signal statistics, envelopping curves, correlation, generate waterfall analysis
Visualisation of results	user-defined layouts
Layouts: content	signals, multiple curves, X/Y-graphs (orbital evolution), images, free text, company logo (user-definable and combinable)
Parallel visualisation	single or all measurement channels, distinct channels of a measurement campaign, compare current/previous measurements (user-definable and combinable)
Cursor	single cursor, reference cursor, harmonic cursor
Signal navigation	using forms navigator: navigation through channels or measurements
Online editing	signal clipping, search functions (max, min,...), zoom scroll function for signal clippings, automatic/fixed scale
Dying	free colour attribution and layout components
Data export	user-definable binary interface, ASCII, UFF, WAVE direct export to MS-Office
Data import	user-definable binary interface, ASCII, UFF, WAVE, Syscom
Documentation	direct print-out, auto-print function (reporting), MS-Office, export of individual components of the layout
Future extensions	Option "Waterfall analysis"

MEDA: most important features in building vibration applications

Application fields
Measurement of mechanical vibrations and shocks induced by traffic, construction works, dismantling, blasts and machines or rams
Conservation of evidence and monitoring
Permanent measurement, long-term or permanent monitoring of mechanical vibrations and shocks and production of protocols
Permanent monitoring with alarm systems or remote control
Single measurement sites, mutiple measurement sites
Coupled measurements: building vibrations, airborne sound
Measurement of acceleration to supervise IT systems and vibration-sensitive machines/laboratories
Assessment of the impact of mechanical vibration and shock on human beings and buildings according to national or internal standards
Monitoring/control of anti vibration measures

Ram works

Blasts



Your advantage: modular system

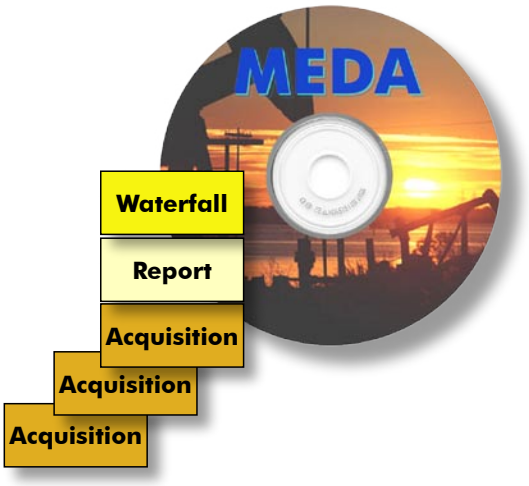
Measurement equipment for mechanical vibration & shock

Transducers	
Sensors	
WMS SM 6	normalised linearised geophone
Measurement category	velocity
Directions	3 directions, (1 vertical, 2 horizontal) or horizontal/vertical respectively
Accuracy	28,8 (mm/s)/V
Max range	0,1 - 500 mm/s
Calibration	according to calibration sheet

Amplifier/Signal Conditioner/Power Supply	
Amplifier/supply	**WMS 116 (4/8 channels)**
Inputs	triaxial and uniaxial sensors
Filter	bandpass filter 1 Hz to 80 Hz or 315 Hz
Power	rechargeable integrated battery and charger

Other/additional devices on request.
We will provide consulting for the use of or combination with your existing measurement equipment.

Please call for free demo software!



Your advantage: custom-designed systems

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Meßsysteme · Software

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Practical experience put into practice!