

Maintenance Technology Specialist

Measure • Analyze • Improve

Haliza 10

MACHINERY ANALYZER



1

MEASURE VIBRATION, PRESSURE & ENGINE SPEED

2

ANALYZE MACHINERY PERFORMANCE

3

IMPROVE PLANT EFFICIENCY & RELIABILITY

Power Plant Diesel Engine | Marine Diesel Engine | Reciprocating Compressor | Gas Engine



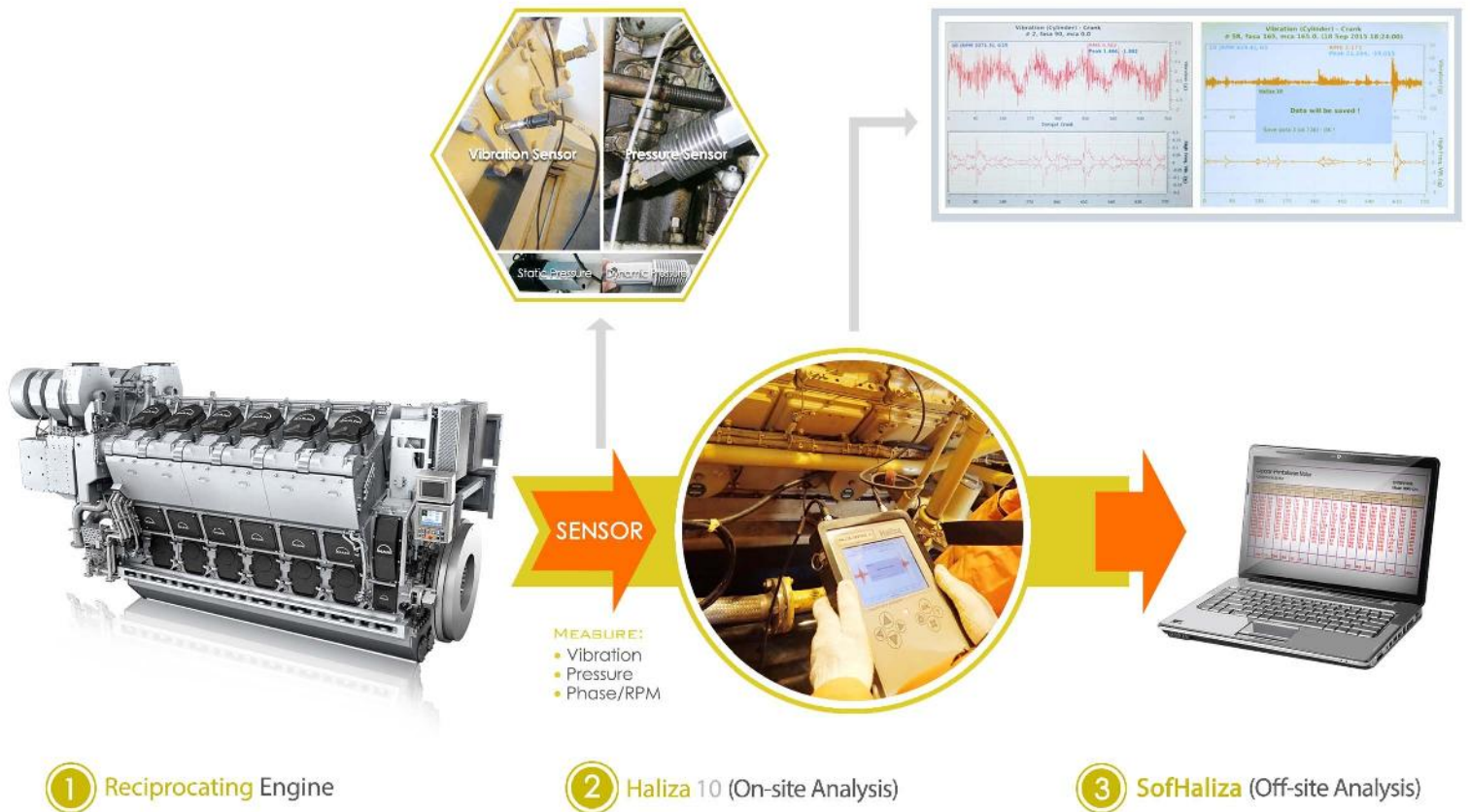
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PRODUK INDONESIA
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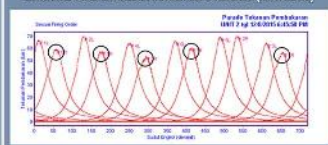
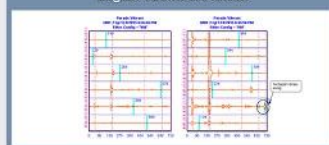
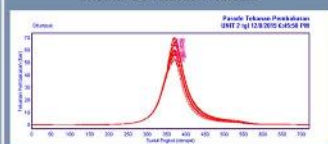
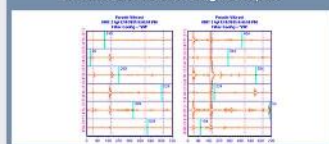
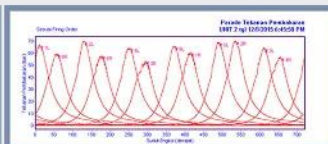
■ Diesel machinery is an expensive important asset of a plant with high operational and maintenance cost.

■ Machine performance will be derated overtime hence it needs regular maintenance to bring its performance back to the baseline condition.

■ Machines can't talk, it needs a measurement of the actual parameter condition of the machine that is accurate and reliable.

Vibration Analysis

Pressure Analysis



Analyze

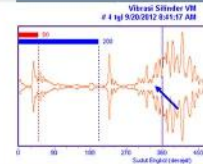
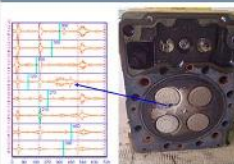
- Indication of unsuitable valve timing
- Indication of unbalance combustion compression
- Indication of compression leakage
- Indication of injector performance
- Indication of mechanical parts wear out

Improvement Action

- Recommendation of valve mechanism setting
- Recommendation of valve seat inspection and maintenance
- Recommendation of injector inspection
- Recommendation of cylinder mechanism inspection
- Recommendation of cooling system inspection

Result

- More stabilize machine performance
- Peak pressure balance of each cylinder
- Power output balance of each cylinder
- Machine performance restored to its baseline/new condition
- Appropriate firing order and peak pressure as well as the manufacturer's recommendation



SPECIFICATION

HALIZA PORTABLE ANALYZER

Processor & Main System

ARM Cortex A8 Processor

- 1 GHz Processor

Memory

- RAM 512 MB
- ROM 4 GB boot flash
- Expandable Micro SD Card 8 GB

Operating System

- Debian Linux
- Kernel 3.14

Analog/Digital Converter

- 24 bit Delta Sigma
- Programmable Gain and Low Pass Filter

Sensor/Interface Port

- Accelerometer input
- Pressure input
- Pick-up/Phase input
- Analog DC/AC input

Display & Interfacing

Color Display

- 5.7 inch TFT LCD
- Transflective
- LED Backlight setting

Communication

- USB 2.0 to Serial FTDI
- Ethernet 10/100 Mbps

Indicator

- RED LED for RPM Indicator and charging
- GREEN LED for keymat indicator response

Battery

- Li-ion 12.6 Volt 4400 mAh
- 7 hours of normal operation
- 4 hours charging (with auto cut off)
- 18 hours standby with minimum backlight

Casing

- Unibody CNC-machined aluminium
- Accompanied with rubber damper for safety
- Weight: 2 kg
- Dimension: 264 x 181 x 41 mm (with rubber sleeve)
- Working environment: 20 - 50° C

ANALYSIS SOFTWARE

SofHaliza

CERTIFICATION

- EMC/EMI Emission Immunity
- IP65

SENSORS

Vibration Sensor (Accelerometer)

- Response frequency 0.5 Hz - 15 kHz
- Bias voltage 12.5 Volt, 4 mA
- Sensitivity 100 mV/g RMS
- Magnetic base

Cable and Connector

- Sensor cable
- Push-pull non-corrosive connector

Pressure Transducer

Piezoresistive Pressure Transducer

- Measurement range: 0 - 250 bar
- Fluid temperature range: 10 - 1400 °C

Cooling Method

- Air cooling system, attached to the sensor

Speed/Phase Sensor

Rotation Pick-Up Sensor

- Once-per-turn pick-up
- Type: Hall effect
- Equipment with magnetics stand
- Cable connection
- Optical type

Timing light

- Cable and connector
- Push-pull non-corrosive connector

Temperature Gun

Infrared Temperature Gun

- Non-contact infrared with laser pointer
- Effective range: -30/+535 °C

TOOLS & ACCESSORIES

Battery Charger

- Battery Charger 18.5 Volt 3.5 Ah

User Manual

Wrench 35 mm for pressure transducer

Hardshell Suitcase

PRODUCT PACKAGE

PRODUCT

- ✓ Haliza machinery analyzer
- ✓ SofHaliza analyzer software

SENSOR

Vibration Sensor

- ✓ Accelerometer & cable (3m)
- ✓ Flat surface magnetic base

Pressure Sensor

- ✓ Transducer & cable (3 m)
- ✓ Cooling fin

Phase Sensor

- ✓ Magnetic pickup
- ✓ Marker cable (30 m)
- ✓ Optical sensor
- ✓ Magnetic stand

TOOLS

- ✓ Portable stroboscope/timing light
- ✓ Infrared temperature gun
- ✓ Communication cable (USB)
- ✓ Battery charger

ACCESSORIES

- ✓ User manual
- ✓ Hardcase
- ✓ Wrench



BENEFIT



- Improve decision making on maintenance
- Improve operation efficiency
- Increase operational efficiency cost
- Decrease the unplanned downtime
- Optimize asset lifetime
- Improve plant reliability

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