



daunbiru
Engineering

Maintenance Technology Specialist

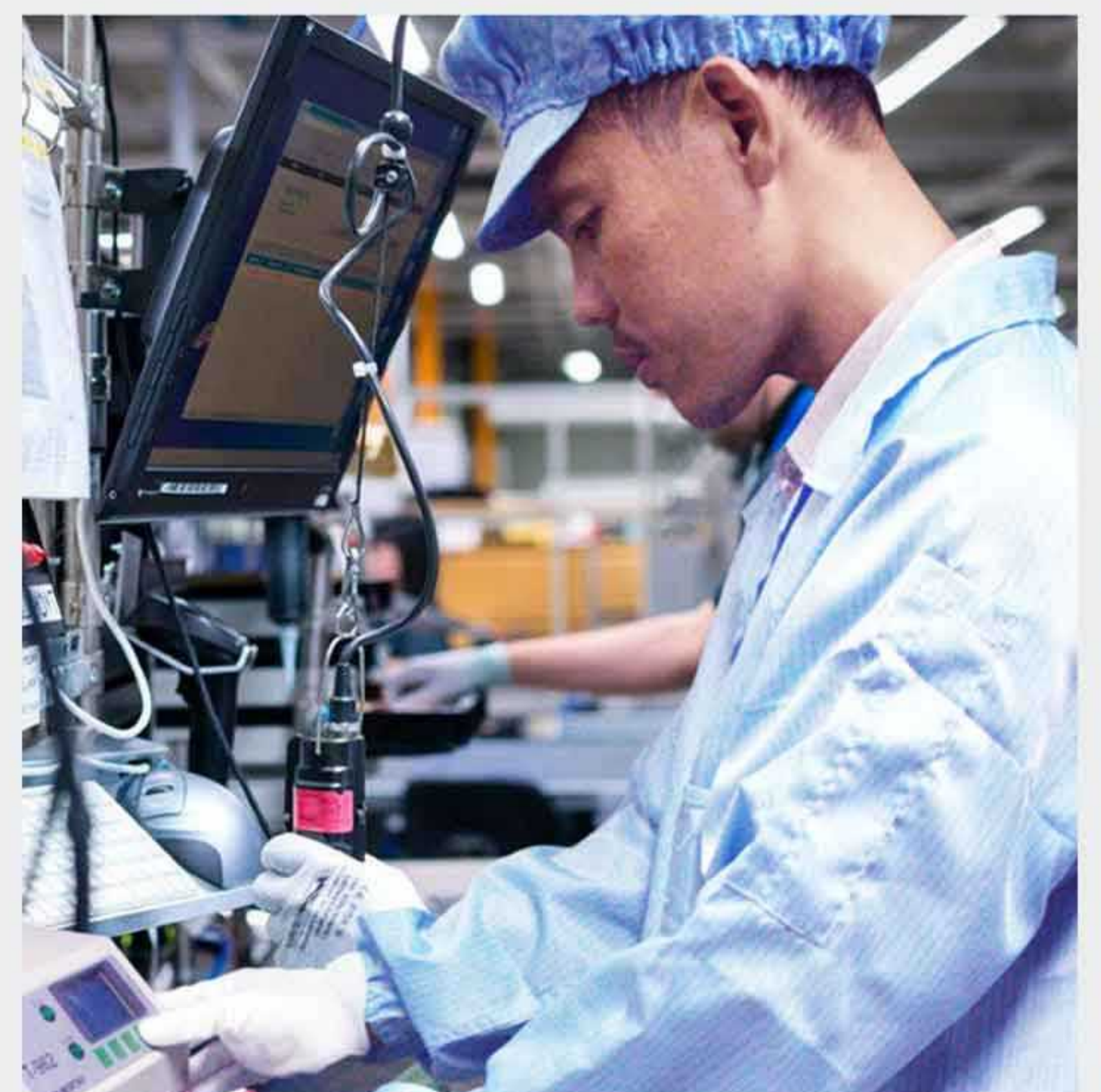
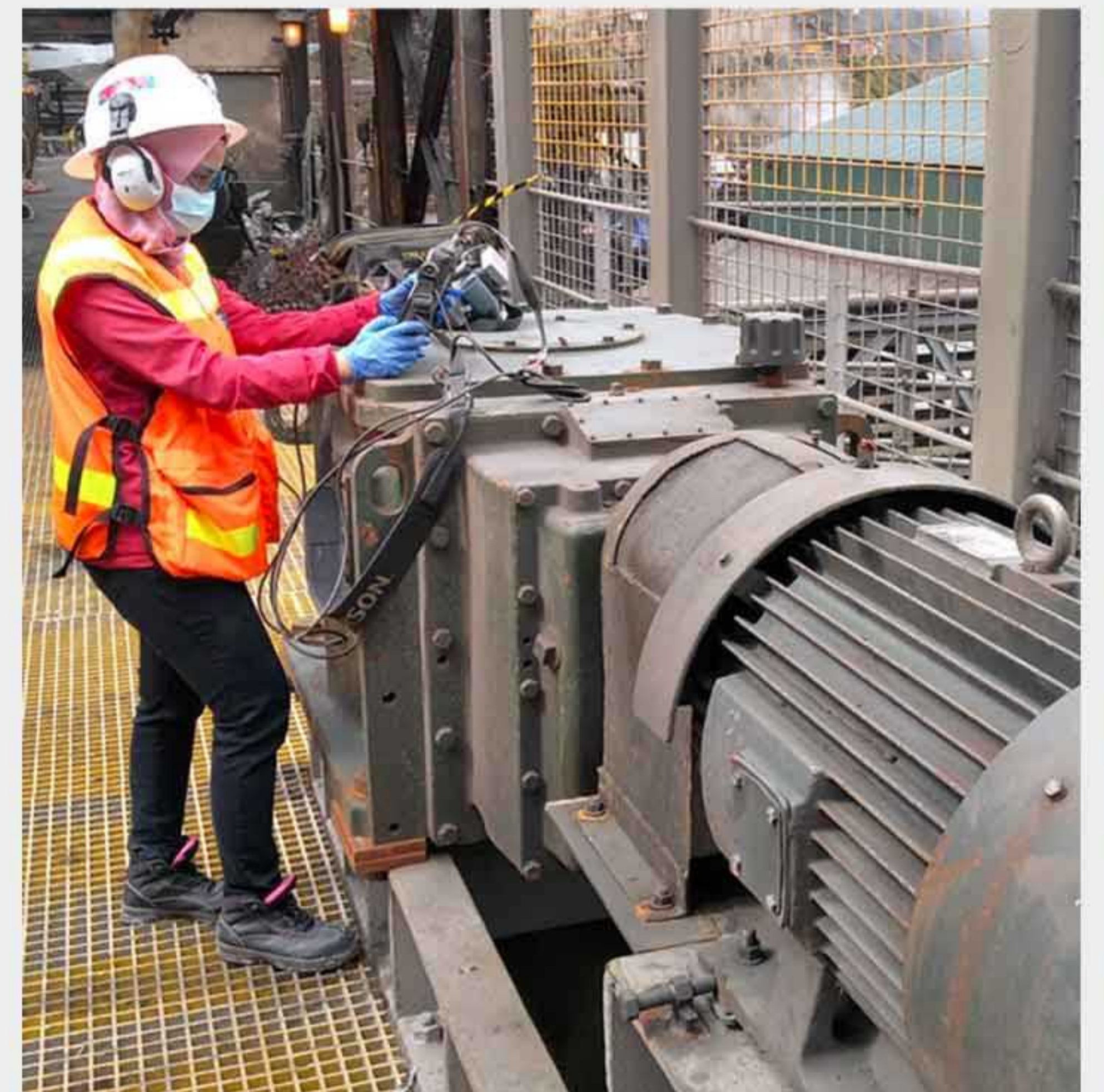
COMPANY PROFILE

PT DAUN BIRU ENGINEERING

MEASURE ←

ANALYZE ←

IMPROVE ←



www.daunbiru.com





OFFICE & WORKSHOP

PT Daun Biru Engineering

Jl. Raya Pekapuran No. 41 Tapos, Depok 16455 - Indonesia
Tlp. (021) 8774 3652 / 8774 3615 | Fax. (021) 8774 3634

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MANAGEMENT MESSAGE



President Director

RUDY ANDRIYANA

Enhance Technology

PT. Daun Biru Engineering is committed to develop the best products and services, in order to provide maximum added values to all stakeholders, employees and especially our customers as valuable working partners of Daun Biru.

By giving a great focus on research and technology development, we will be a nation that is advanced in mastering technology.

“Ever Onward Maintenance Technology”



Chief Commissioner

IR. HATTA KOSASIH KALSID

Spread Technology

The maintenance world is a long supply chain of inter-related parties from owners, suppliers, operators to maintenance practitioners.

PT. Daun Biru has a commitment to disseminate the knowledge of maintenance technology to clients and coworkers in order to become a strong and advanced supply chain.

“Spread Maintenance Technology, let's move forward together”

About Us

PT Daun Biru Engineering is a company that focuses on the field of maintenance technology for industry and power generation.

Established in Jakarta in 2005, PT Daun Biru Engineering has developed into a company that serves the needs of various industries with the following products and services:

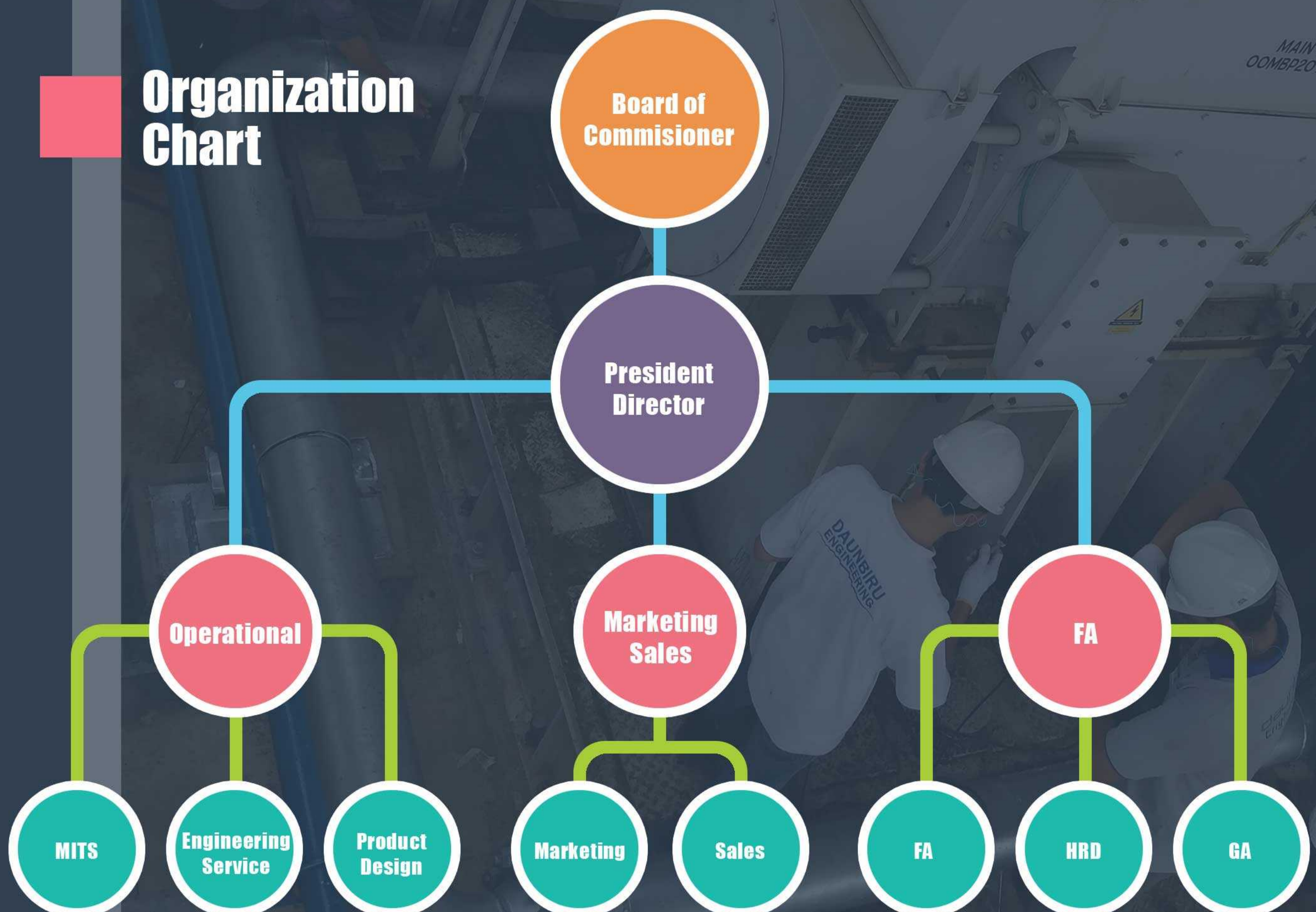
Products

- Haliza Reciprocating Machinery Analyzer
- Haliza Rotating Machinery Analyzer
- Monita Online Monitoring System
- Monita Vibration Simulator for rotating systems

Services

- Condition Monitoring & Predictive Maintenance Services
- Engine Performance Analysis
- Vibration Analysis
- Thermodynamic Analysis
- Thermography Analysis

Organization Chart



Human Resources

Health, Safety & Environment

PT Daun Biru Engineering always try to implement HSE values to all activities both in the office environment or when working on the field

Facilities

Office and workshop in the area of Cimanggis Depok, West Java



Product & Design Division

Product & Design division is the main force of PT. Daun Biru Engineering in developing products according to industry needs that continue to grow. It is in this division that the process of implementing engineering ideas into ready-to-use products is carried out.

Hardware

- Analog/digital circuit design & testing
- Sensors
- Instrumentation & automation
- System integration according to industry standards

Software

- Development of desktop software for maintenance system
- Server software development
- Software for embedded system (*firmware*)

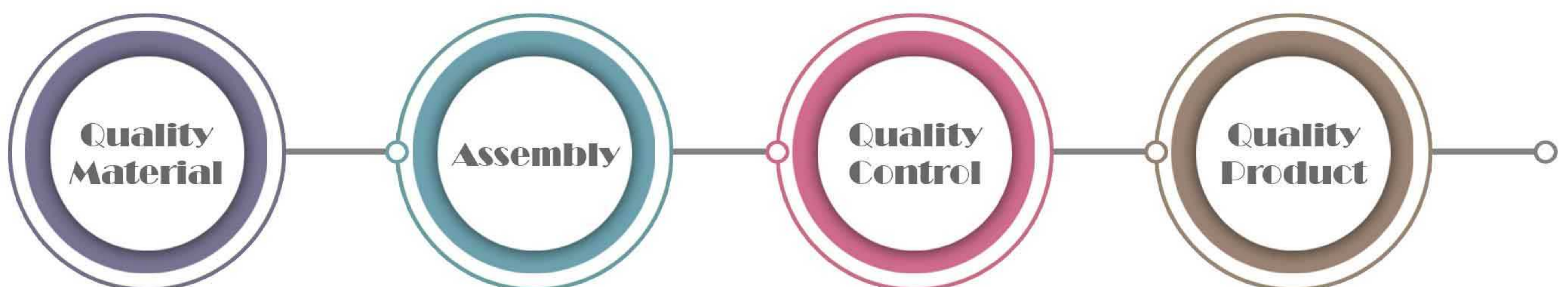
Activities

- New product development
- Improvement of existing products
- Prototype testing
- Field data collection (*user experience*)
- New technologies testing



Product & Design division

Is the main strenght of PT. Daun Biru Engineering



Products

PT Daun Biru Engineering Product Variants

Has a strong mastering maintenance technology and online monitoring system. Hence the products designed in our R&D lab and assembled in our workshop will always use state-of-the-art technology and fulfill industry standards.



Haliza Reciprocating



Haliza Rotating



Monita Vibration Simulator



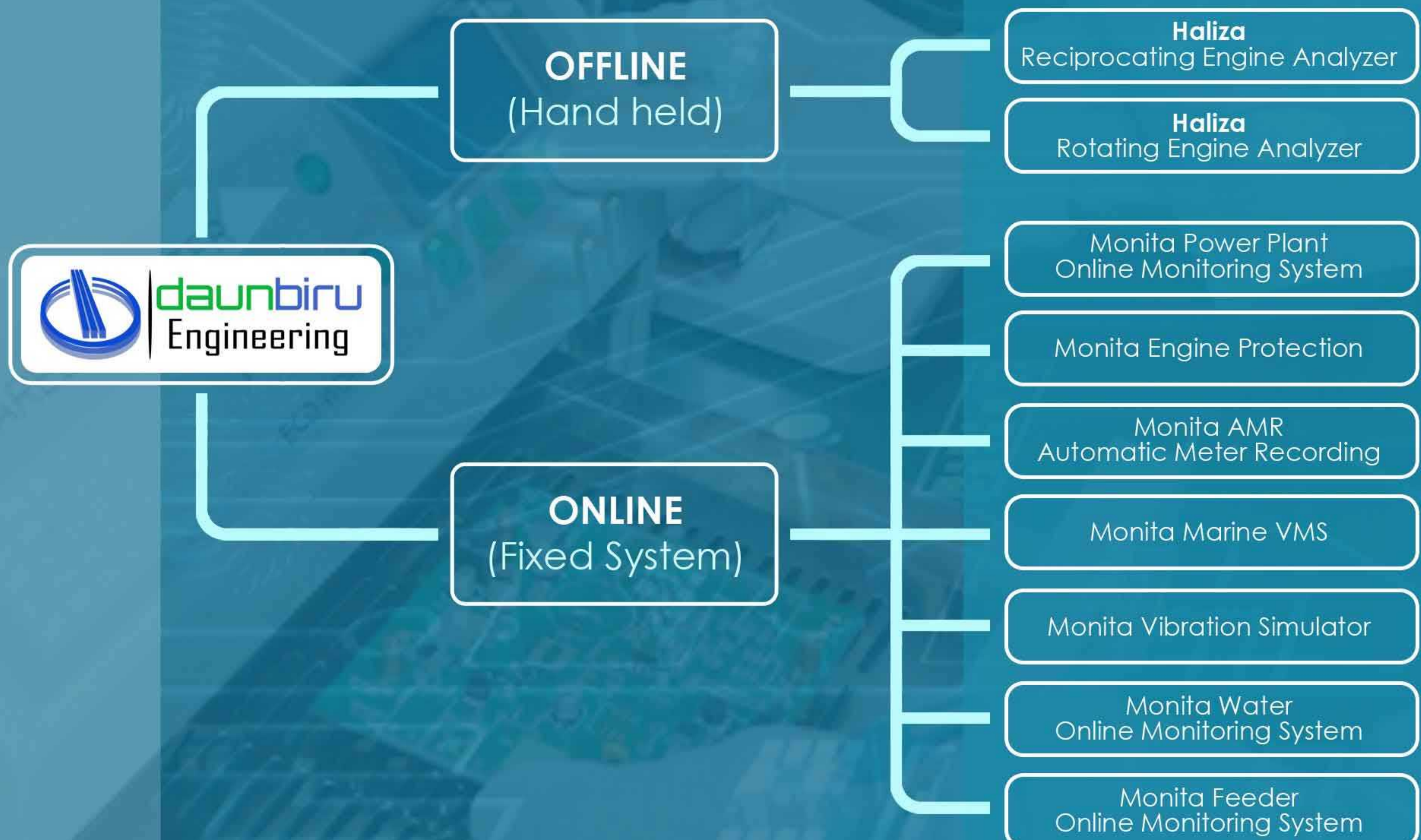
Monita Analog Module



Monita Digital Module



Online Monitoring System



Haliza 10

Reciprocating Machinery Analyzer



1

MEASURE VIBRATION & PRESURE

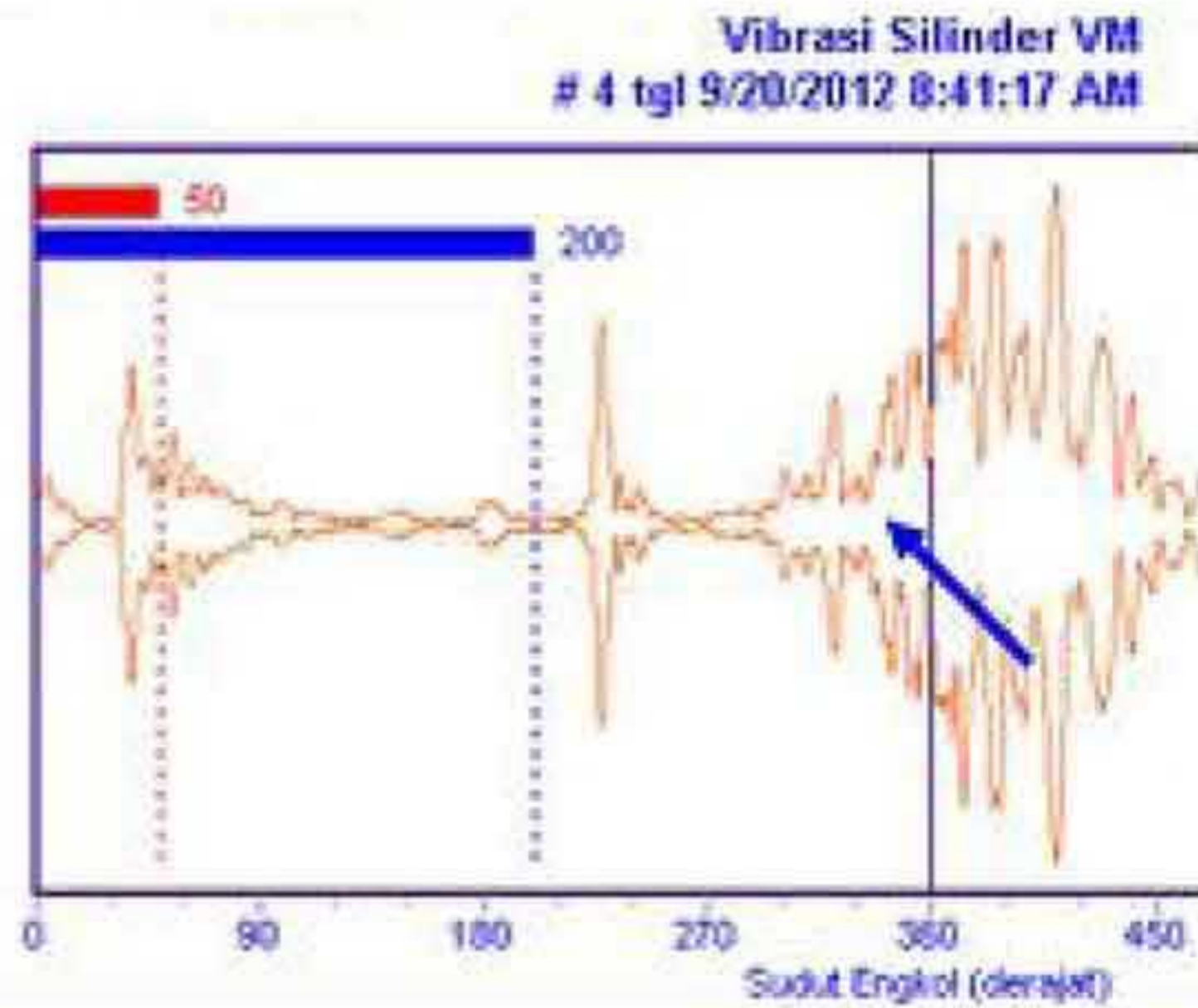
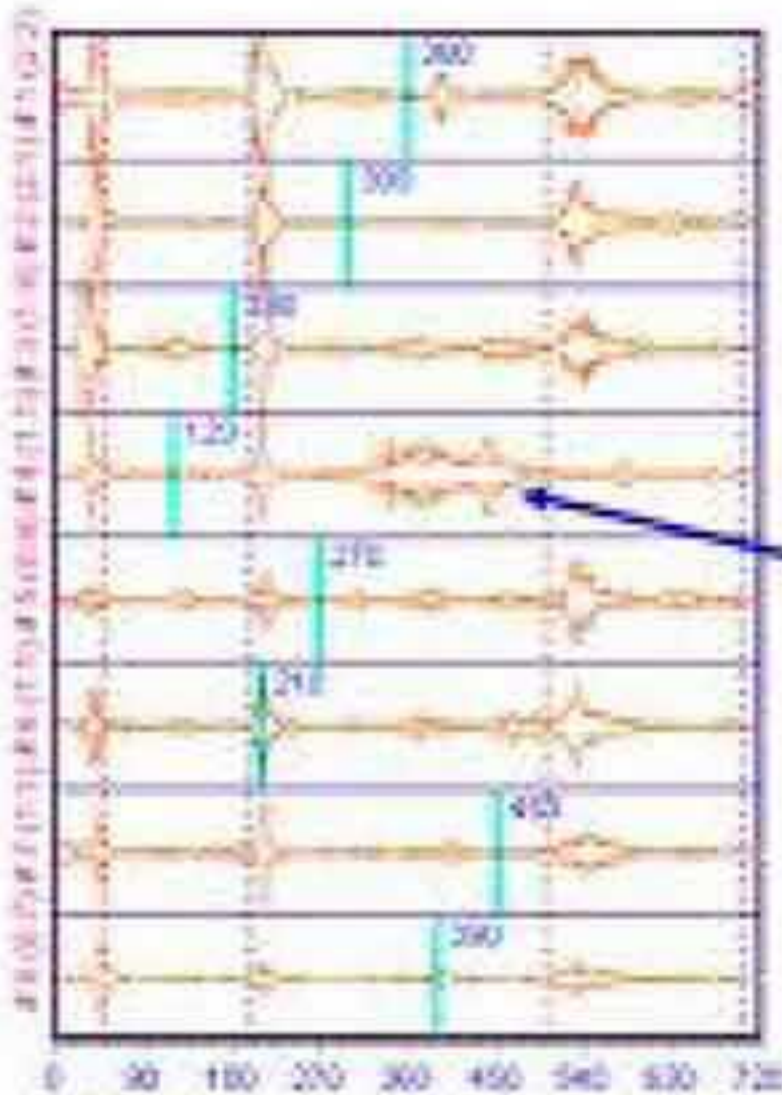
2

ANALYZE MACHINERY PERFORMANCE

3

IMPROVE PLANT EFFICIENCY & RELIABILITY

Power Plant Diesel Engine | Marine Diesel Engine | Reciprocating Compressor



Indication of abnormal vibration

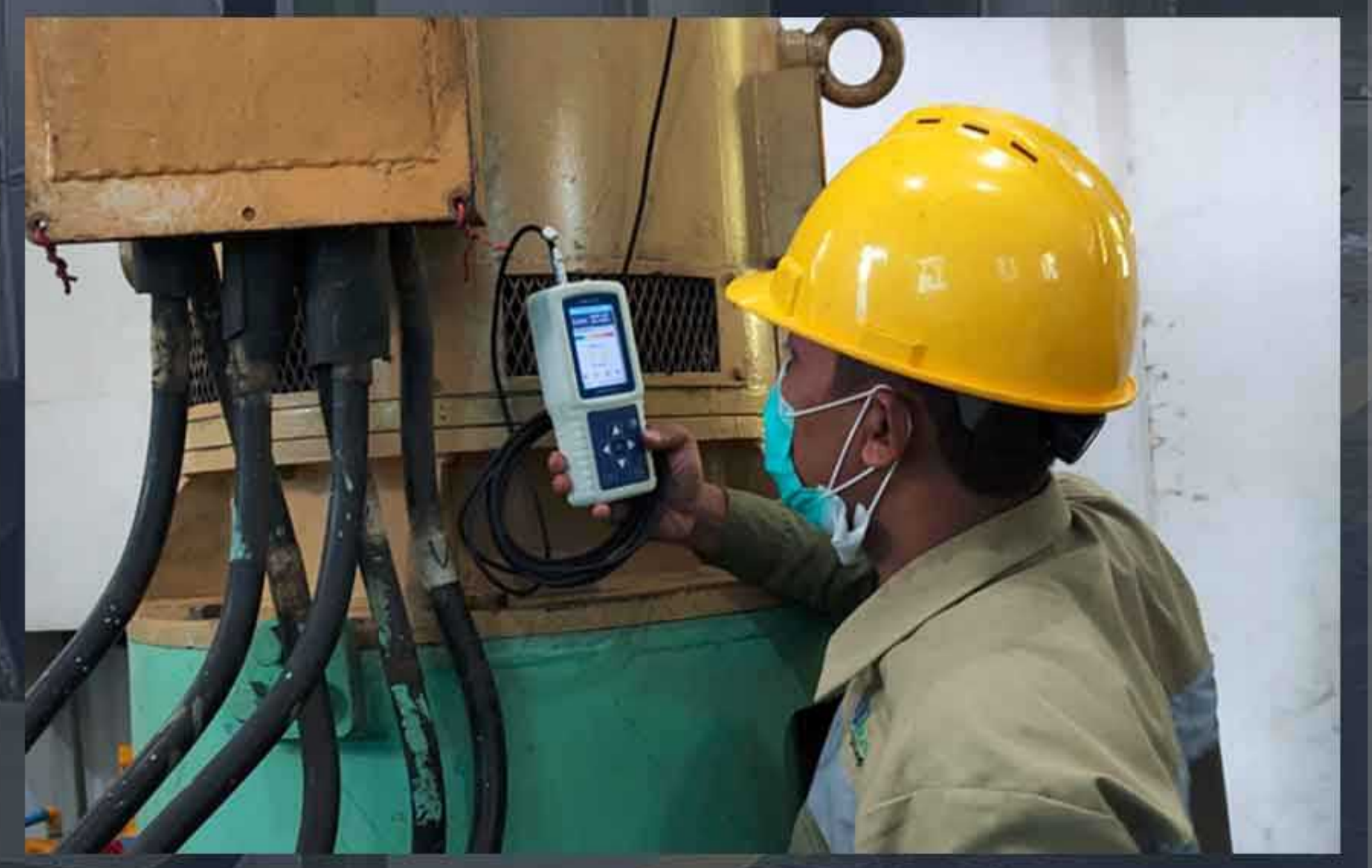
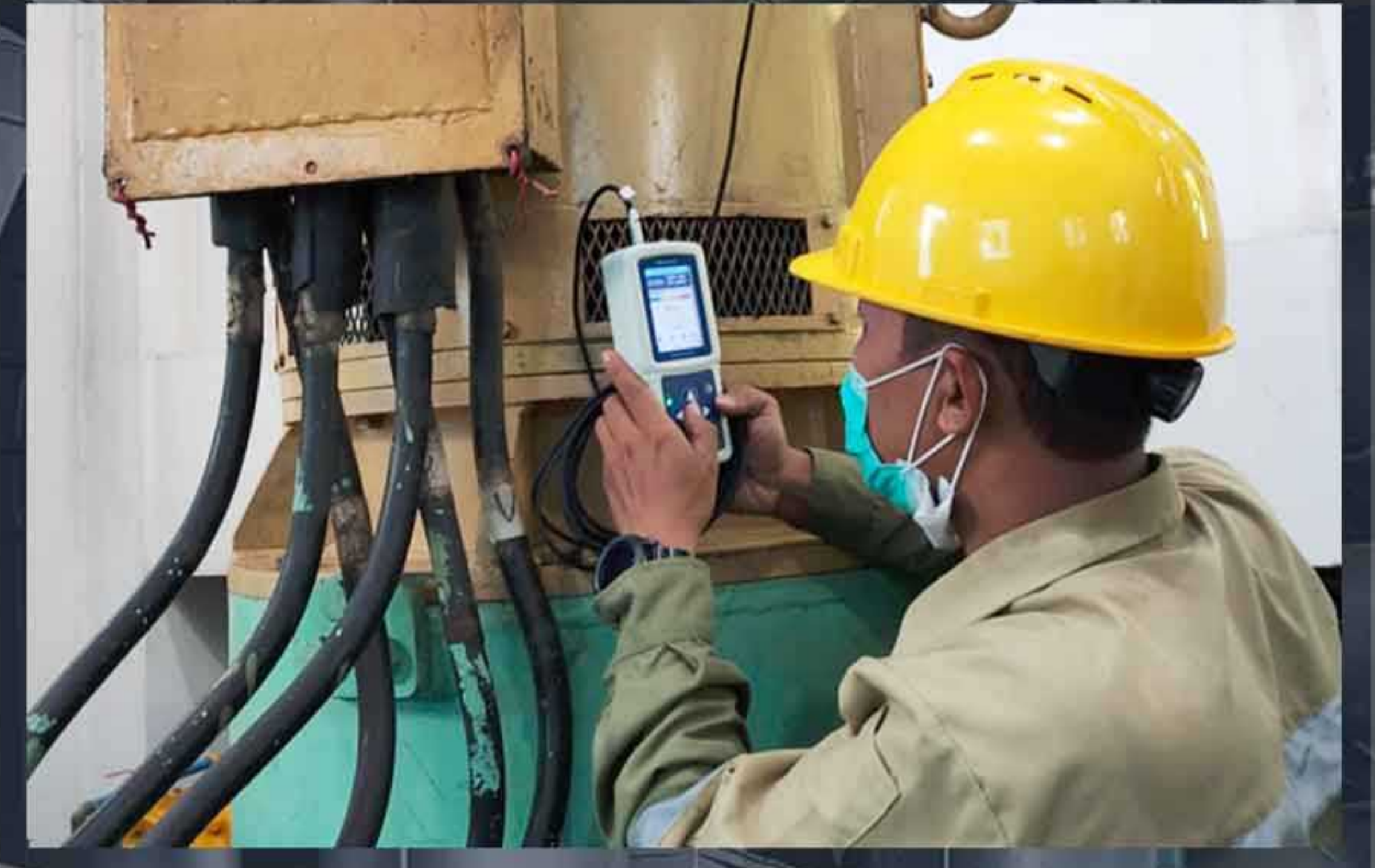
Indication of valve leak



PT Daun Biru Engineering

VIRO

MACHINERY ANALYZER



ELECTRIC MOTOR



PUMP



FAN



PRODUK INDONESIA
KELAS DUNIA

PT Daun Biru Engineering



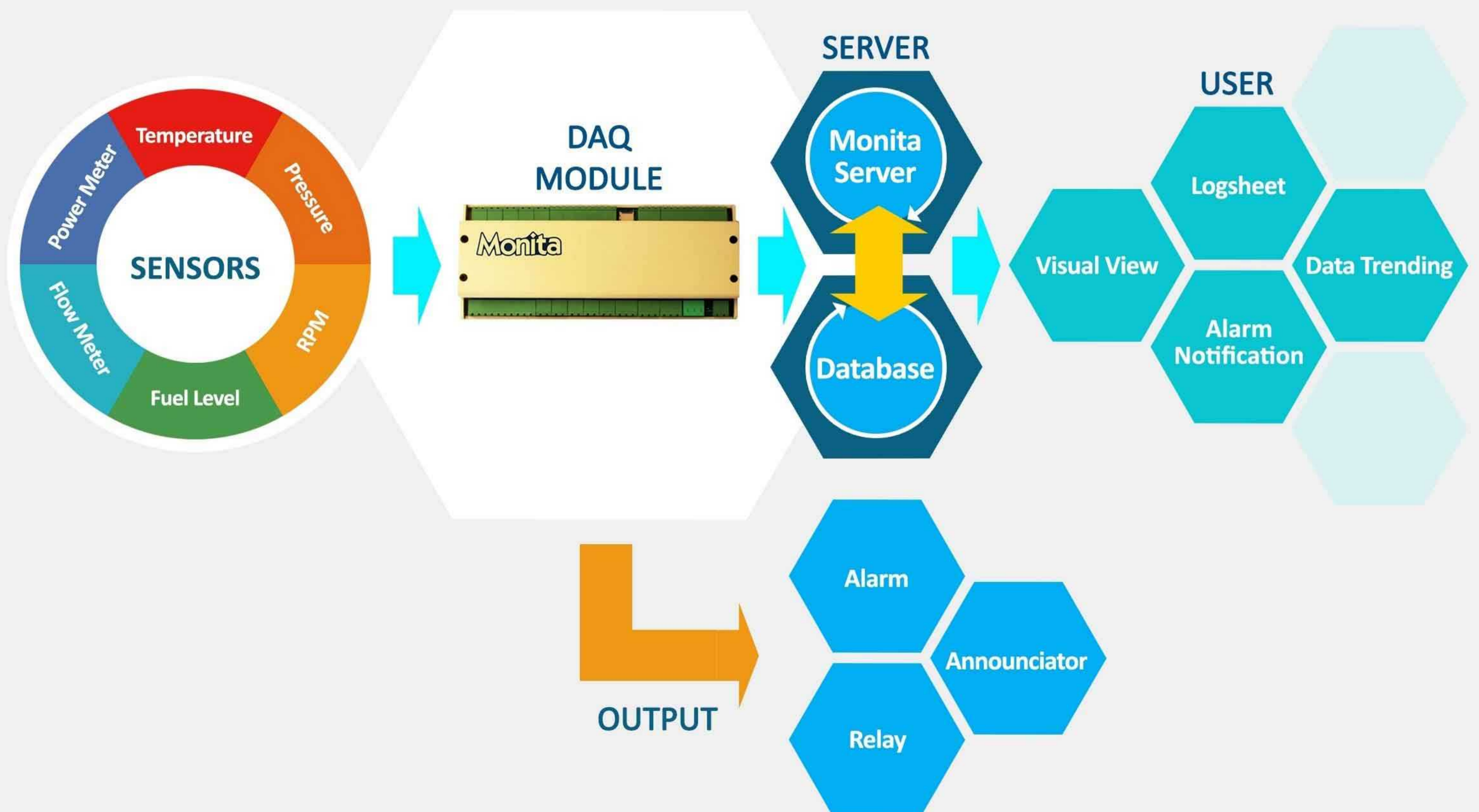


Monita

Monita is a system designed for continuous data needs. Monita system consists of a combination of hardware and software for:

1. Data collection
2. Data transmission
3. Data storage
4. Data processing
5. Report generation

Diagram for Monita



MONITA Component



1 MONITA Analog Module
The analog module is designed to acquire analog data and transmit them to Monita server.
The parameters that can be read are :

- Temperature
- Pressure
- Level
- DC Voltage



2 MONITA Binary Module
The binary module is designed to acquire binary data, counters, status, and transmit them to Monita server.
The parameters that can be read are :

- Flow Meter
- Running Hour
- Alarm Status
- Engine Speed



3 MONITA Hybrid Module
Hybrid module is a combination of analog and binary modules.

This module have a built-in GPRS communication modem to transmit data to server.

With this capability, the module is very suitable to be applied for monitoring in remote areas and sending the data directly to the server.

MONITA Component

4 MONITA Server Software

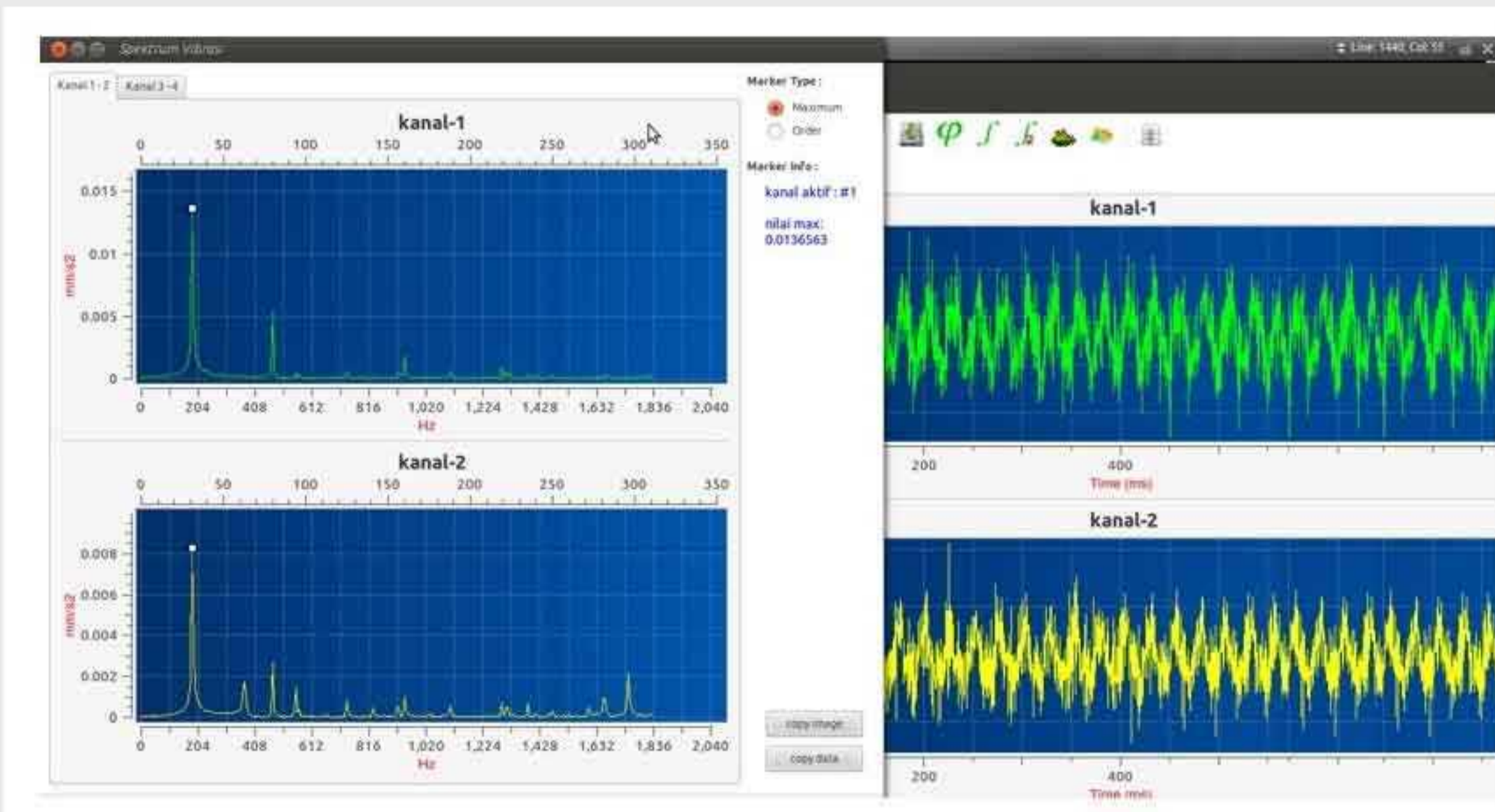
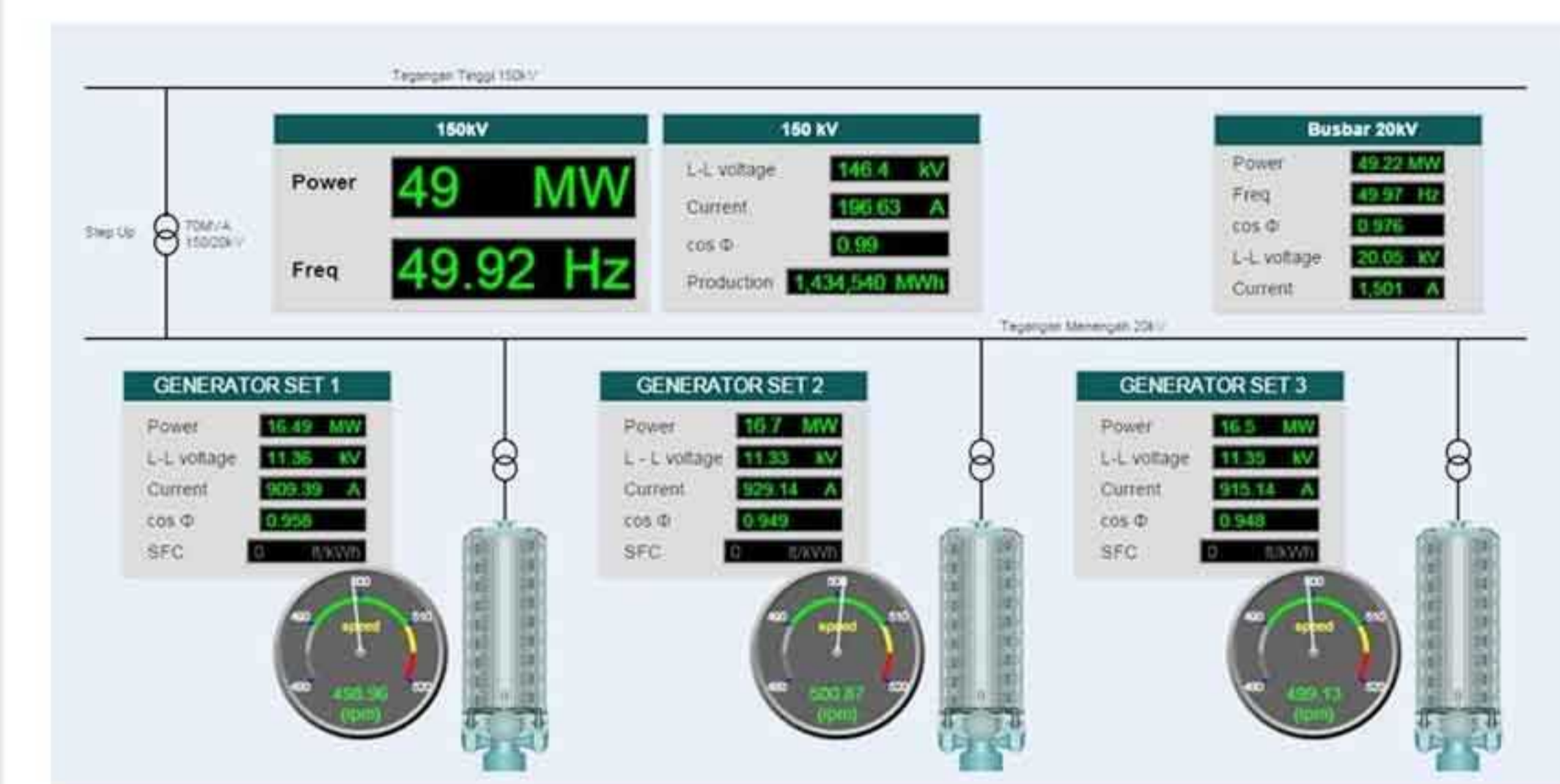
Monita server is a server application for :

- Data storage from DAQ module in the fields

5 MONITA Desktop Software

Monita Desktop is a web application for online monitoring that can be accessed for :

- Data processing
- Report generation
- Data simulation



MONITA System Package

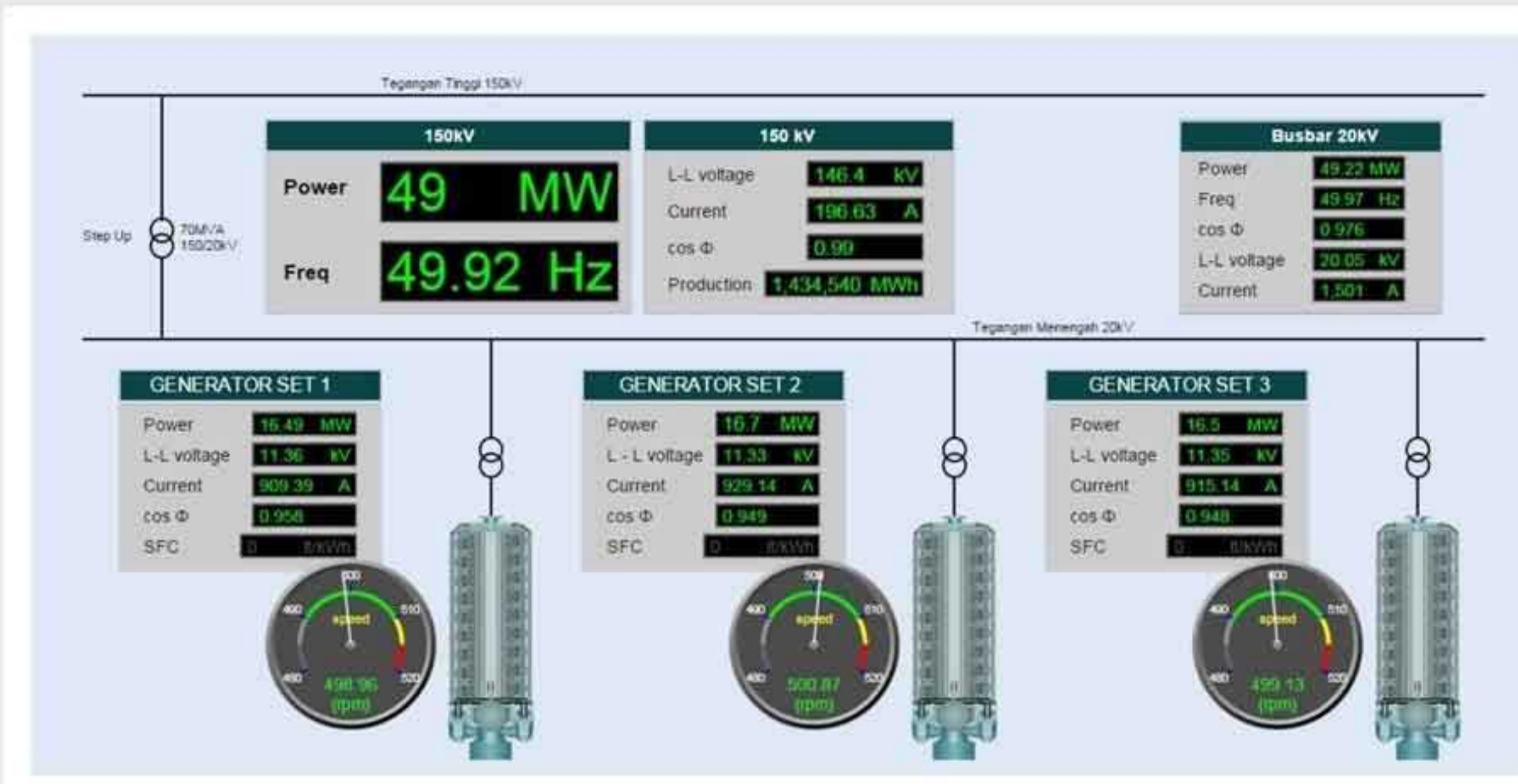
1 MONITA Online Monitoring System

Monita Online Monitoring System is the basic system of Monita.

With monitoring only concept, the data from the equipment can be monitored from remote location through various means of communication.

Some examples of Monita Online Monitoring System are :

- Monitoring of Diesel Engine Generator
- Monitoring Substation/Feeder
- Monitoring Fuel Level in the remote area
- Monitoring the condition of equipment in a remote area



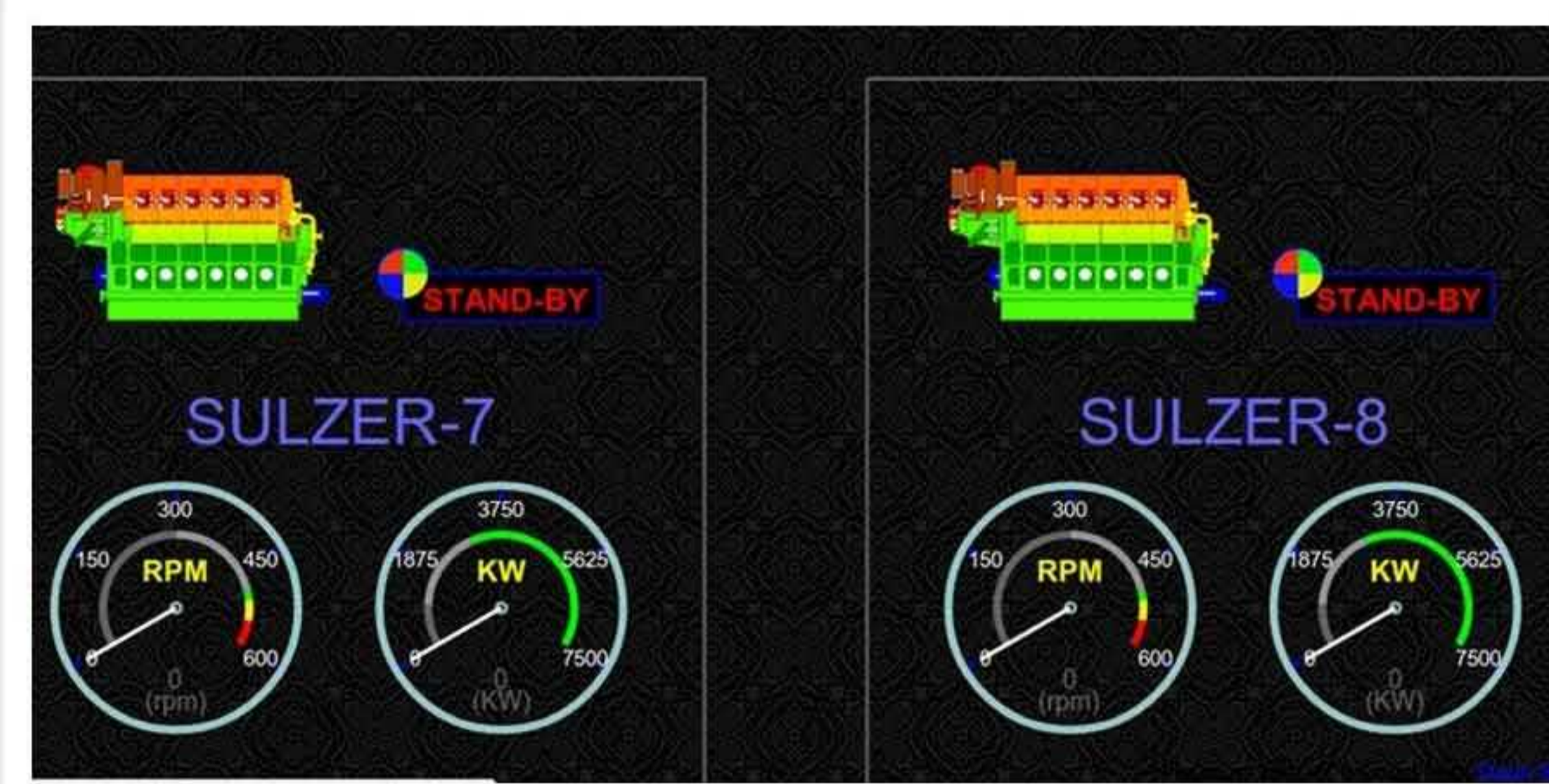
2 MONITA Engine Protection System

Monita Engine Protection System is a Monita system that automatically stops the engine if the parameter exceeds a certain level.

With an intelligent system in the Monita Module, the protection level can be set from one or multiple parameters and engine parameters can be monitored online.

Some examples of Monita Protection System are :

- Diesel Engine Bearing Protection System
- Exhaust Protection System



3 MONITA AMR (Automatic Meter Recording)

Monita AMR is the development of Monita Online Monitoring System which is devoted to reading electricity metering data from various brands and models of kWh meters.

The data presented in the Monita AMR software fulfill the energy transaction requirements. The reporting in Pdf / Excel files are ready for transaction purposes.

Tanggal: 26 Januari 2011
Mesin: Sulzer-7 ZAV-40S
No Seri: 740249

LogSheet Harian
Daya Terpasang: 7200 kW
Tegangan: 6300 Volt

PLTD Ampenan
PLN Sektor Lombok NTB

Eskalasi		SFC		Keterangan	
Waktu	Daya (kW)	Waktu	Daya (kW)	Waktu	Daya (kW)
00:00	0	00:00	0	00:00	0
00:05	0	00:05	0	00:05	0
00:10	0	00:10	0	00:10	0
00:15	0	00:15	0	00:15	0
00:20	0	00:20	0	00:20	0
00:25	0	00:25	0	00:25	0
00:30	0	00:30	0	00:30	0
00:35	0	00:35	0	00:35	0
00:40	0	00:40	0	00:40	0
00:45	0	00:45	0	00:45	0
00:50	0	00:50	0	00:50	0
00:55	0	00:55	0	00:55	0
01:00	0	01:00	0	01:00	0
01:05	0	01:05	0	01:05	0
01:10	0	01:10	0	01:10	0
01:15	0	01:15	0	01:15	0
01:20	0	01:20	0	01:20	0
01:25	0	01:25	0	01:25	0
01:30	0	01:30	0	01:30	0
01:35	0	01:35	0	01:35	0
01:40	0	01:40	0	01:40	0
01:45	0	01:45	0	01:45	0
01:50	0	01:50	0	01:50	0
01:55	0	01:55	0	01:55	0
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03:25	0	03:25	0	03:25	0
03:30	0	03:30	0	03:30	0
03:35	0	03:35	0	03:35	0
03:40	0	03:40	0	03:40	0
03:45	0	03:45	0	03:45	0
03:50	0	03:50	0	03:50	0
03:55	0	03:55	0	03:55	0
04:00	0	04:00	0	04:00	0

Keterangan:
Total Produksi AMR: 114.675.000 kWh
Total Pemakaian AMR: 114.675.000 kWh
SFC Meter: 0,220 kWh/kWh

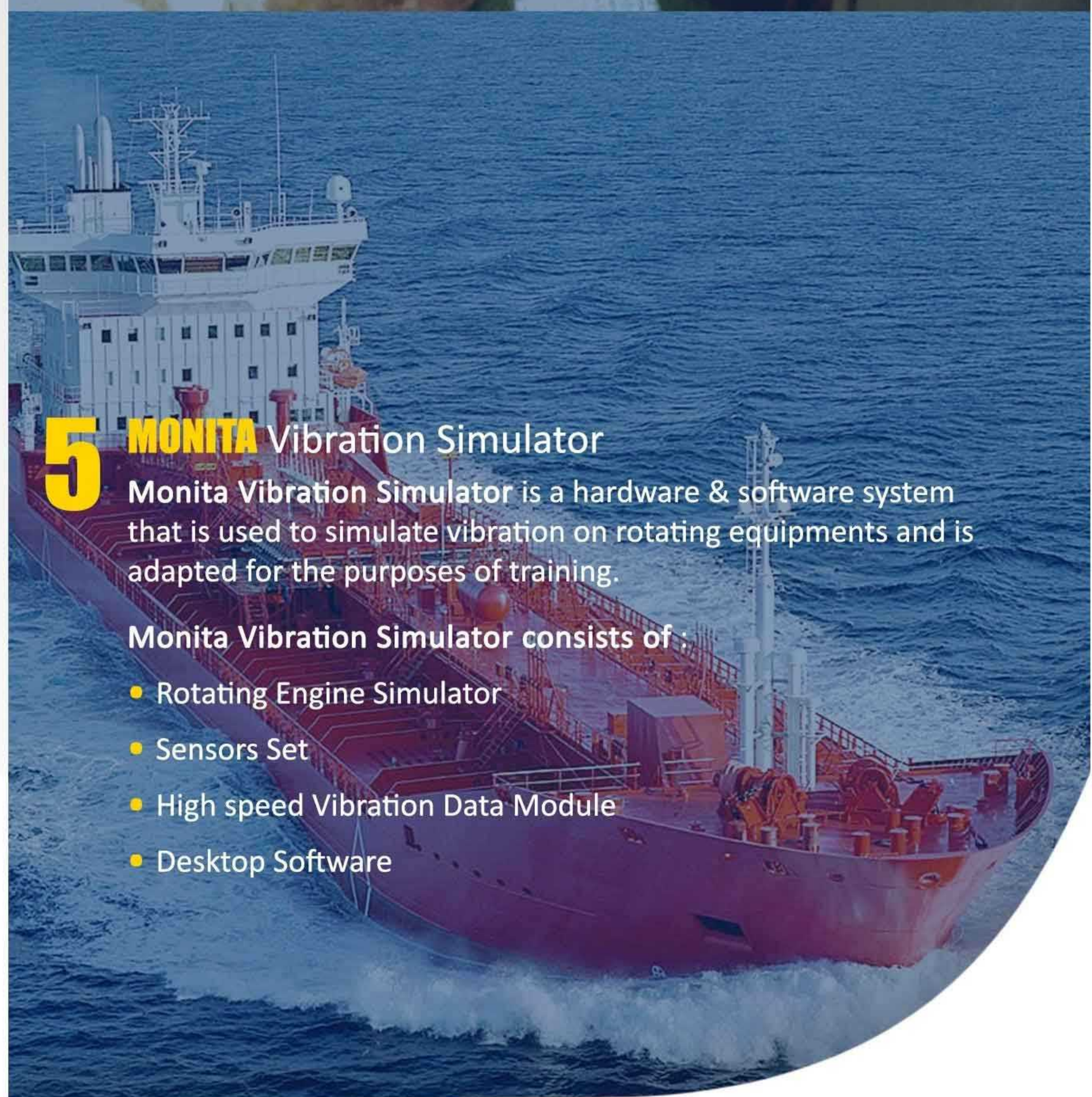


4 MONITA Marine

Monita Marine is a vessel monitoring system that collects the operating parameters of the ship and transmit them to main operation office using satellite communication technology.

The data that can be read are :

- Engine Speed
- Propeller Speed
- Fuel Consumption
- kWh Meter
- Auxiliary Engine Status
- Fuel Tank Level
- Location (GPS) / Position Tracking



5 MONITA Vibration Simulator

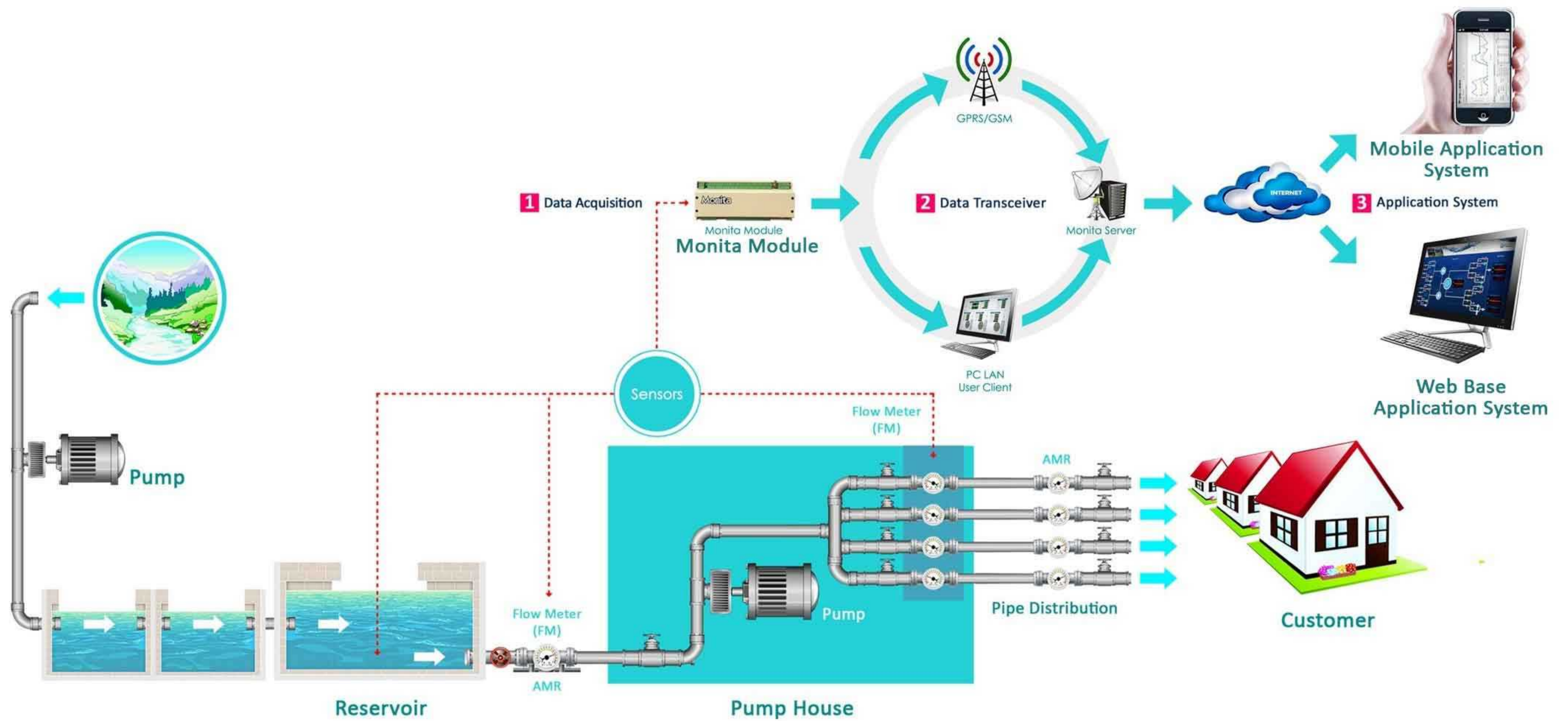
Monita Vibration Simulator is a hardware & software system that is used to simulate vibration on rotating equipments and is adapted for the purposes of training.

Monita Vibration Simulator consists of :

- Rotating Engine Simulator
- Sensors Set
- High speed Vibration Data Module
- Desktop Software



Water Management Monitoring System



Water Management Monitoring System

Online monitoring system for Water Treatment Plant (WTP) or Water Treatment Plant (WTP) that can monitor remotely such as: volume, discharge, turbidity and water level in realtime, so that information or problems in the field can quickly known.

Benefit

- Information in the field can be obtained in realtime, quickly and accurately
- Very efficient in its operations thus reducing operational costs
- Speed up decision making if there are problems in the field
- Can store very large historical data





OVM

Online Vibration Monitoring

Features

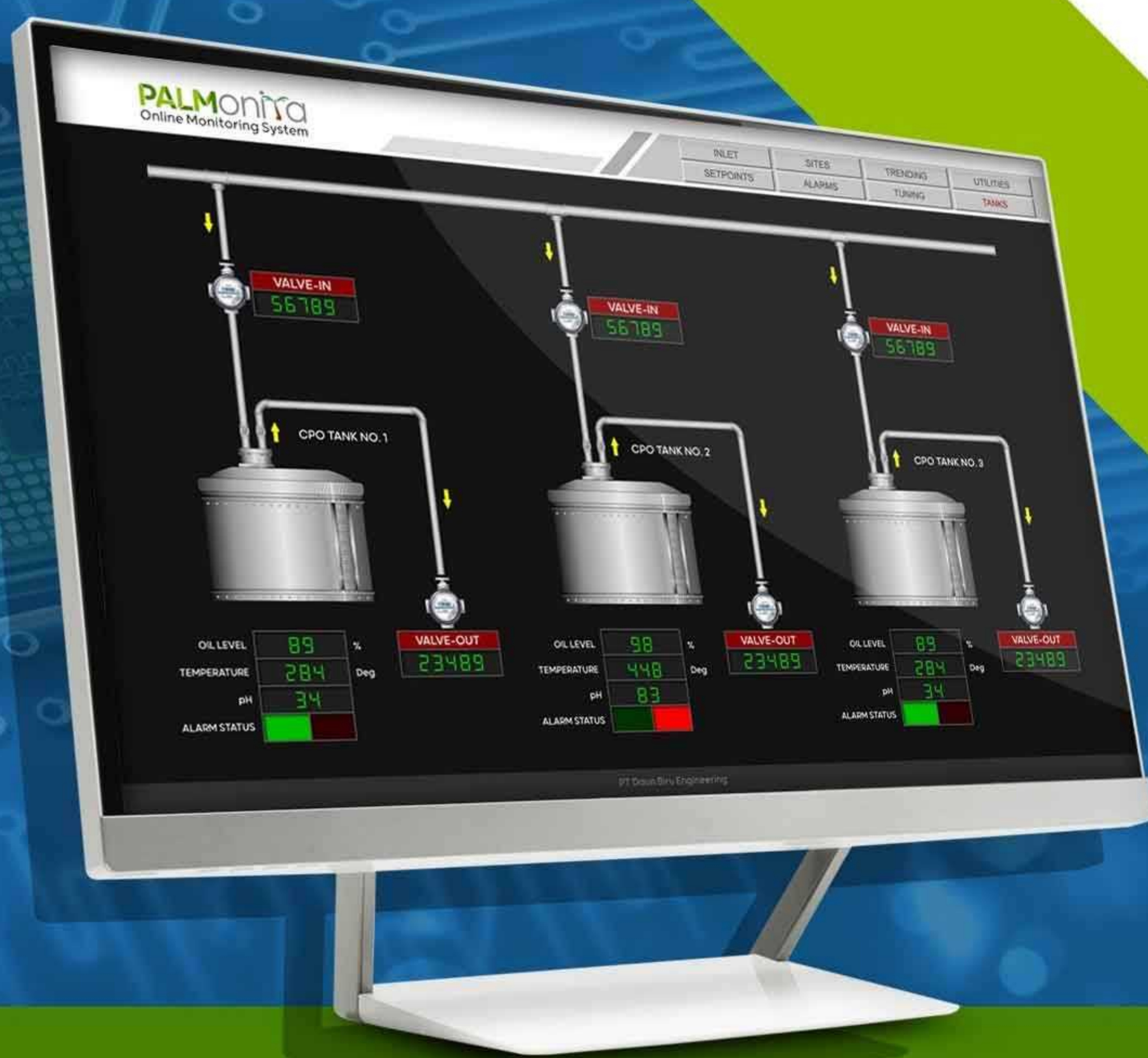
- Multiple accelerometer sensor options
- Ethernet transmission (100 Mbps)
- Wireless communication
- Built-in power supply
- Built-in junction/terminal block
- Desktop based software (Monitoring & module configuration)
- Proven engineering concept & implementation



Technology Innovation

Palm Oil Industry Monitoring Online

- Measure Parameters and Movement
- Analyze Activities and Performance
- Improve Cost Efficiency and Safety



Water Quality Monitoring System

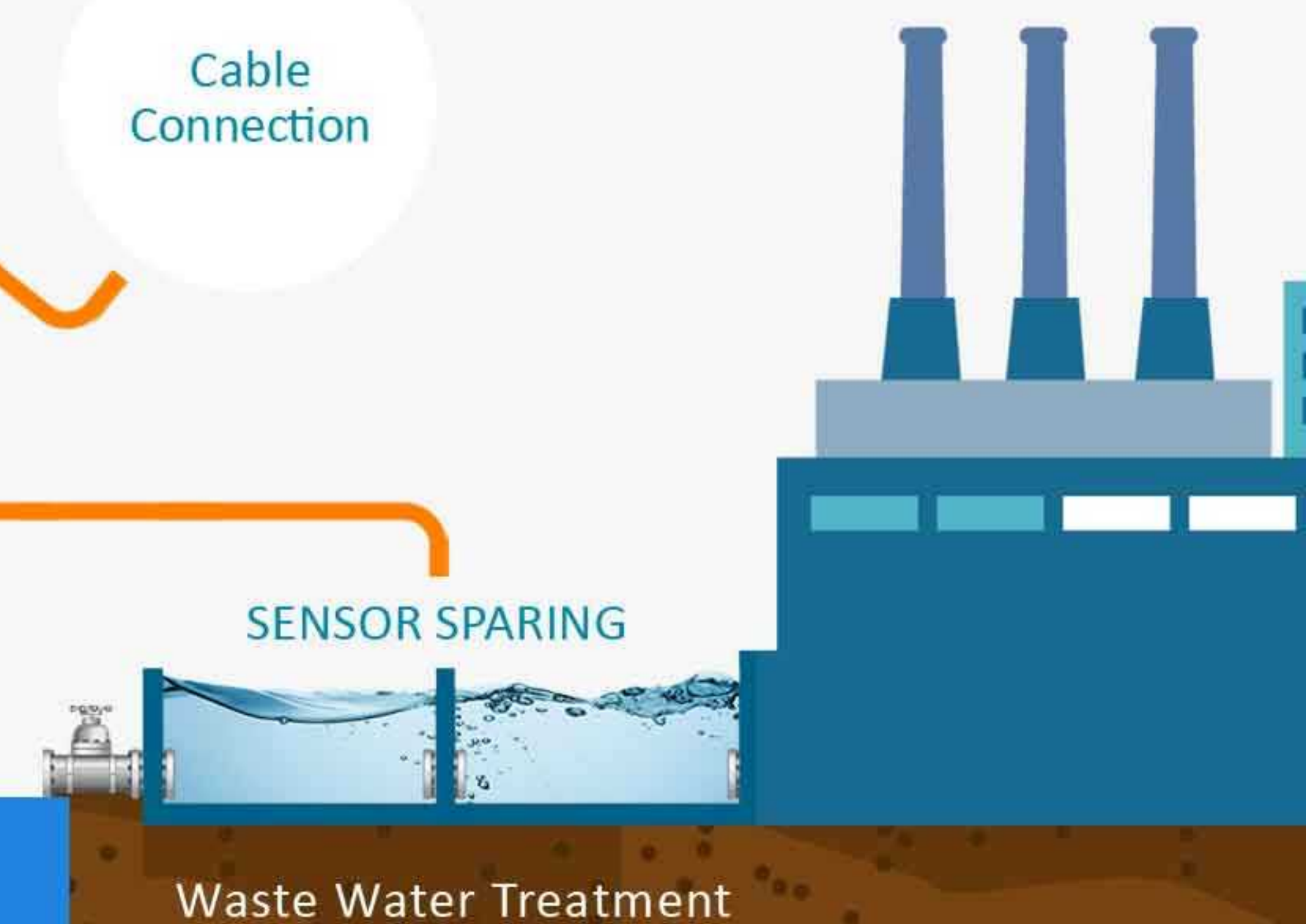
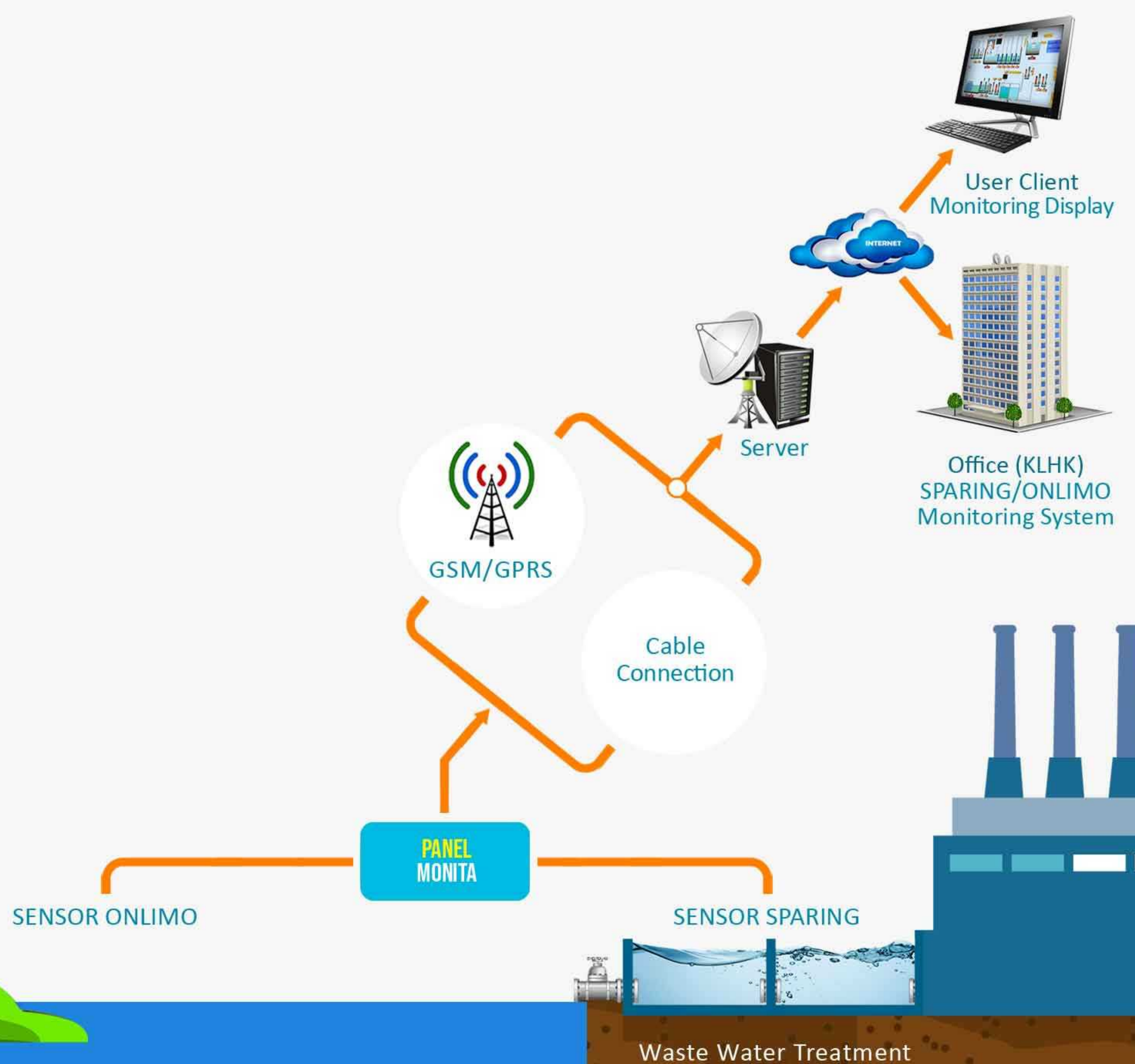
ONLIMO



SPARING



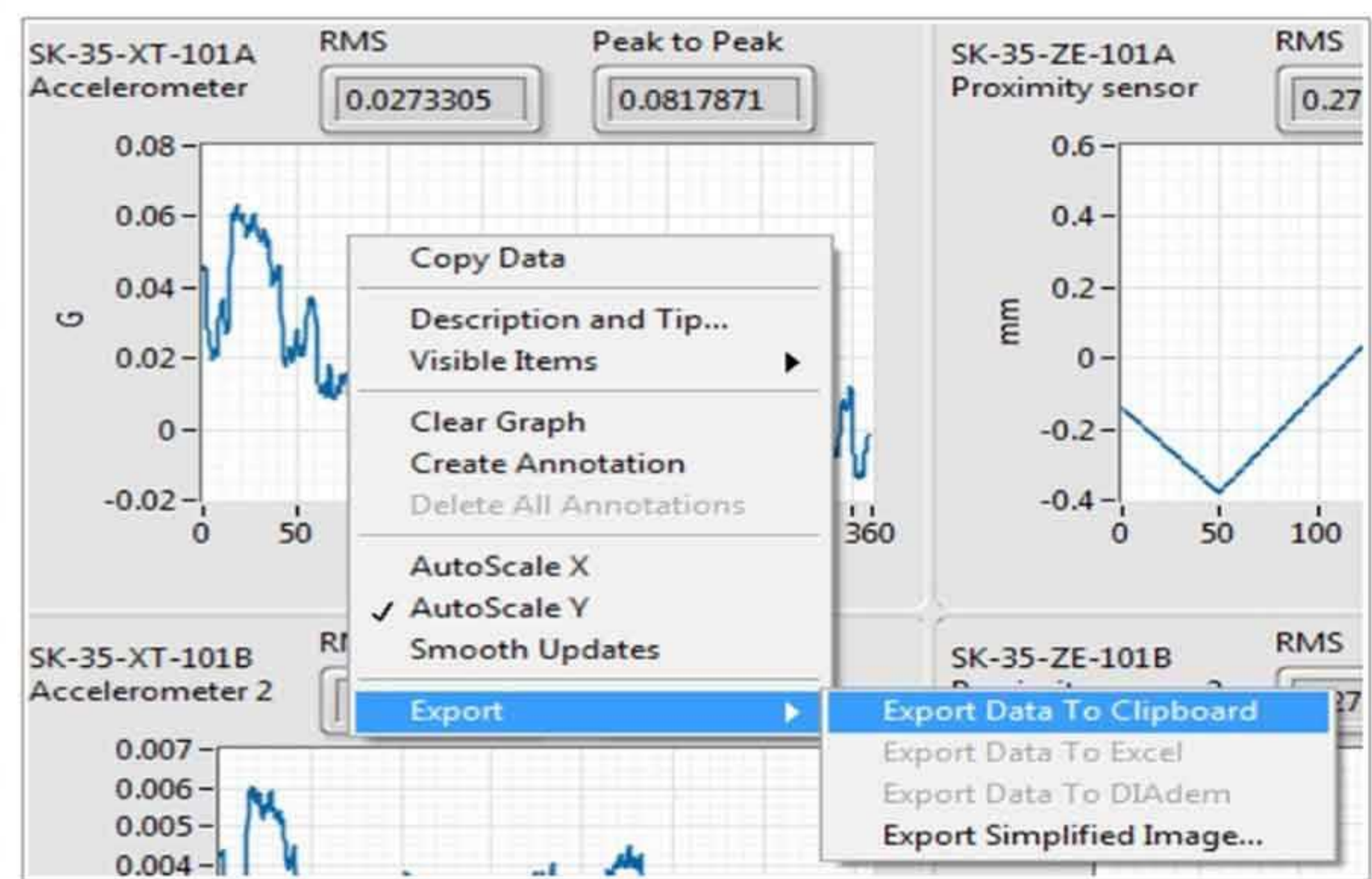
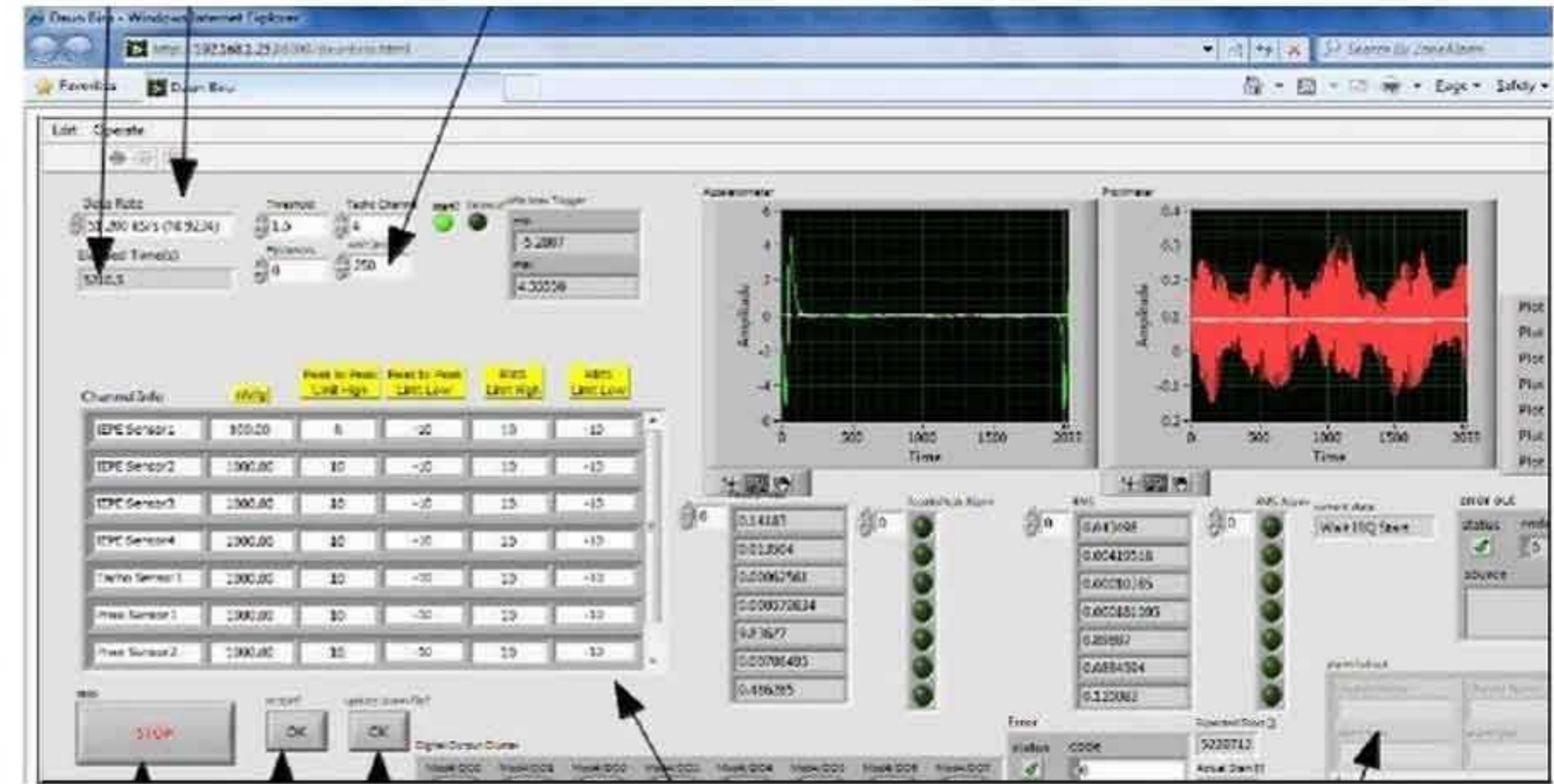
Level | Volume | Debit | Pressure | Alarm | COD | pH | TSS | NH₃-N
BOD | Nitrat | NTU | Ammonium | TDS | Suhu



Waste Water Treatment

Monita Rod Drop Monitoring

Protection System to reliability of reciprocating compressor

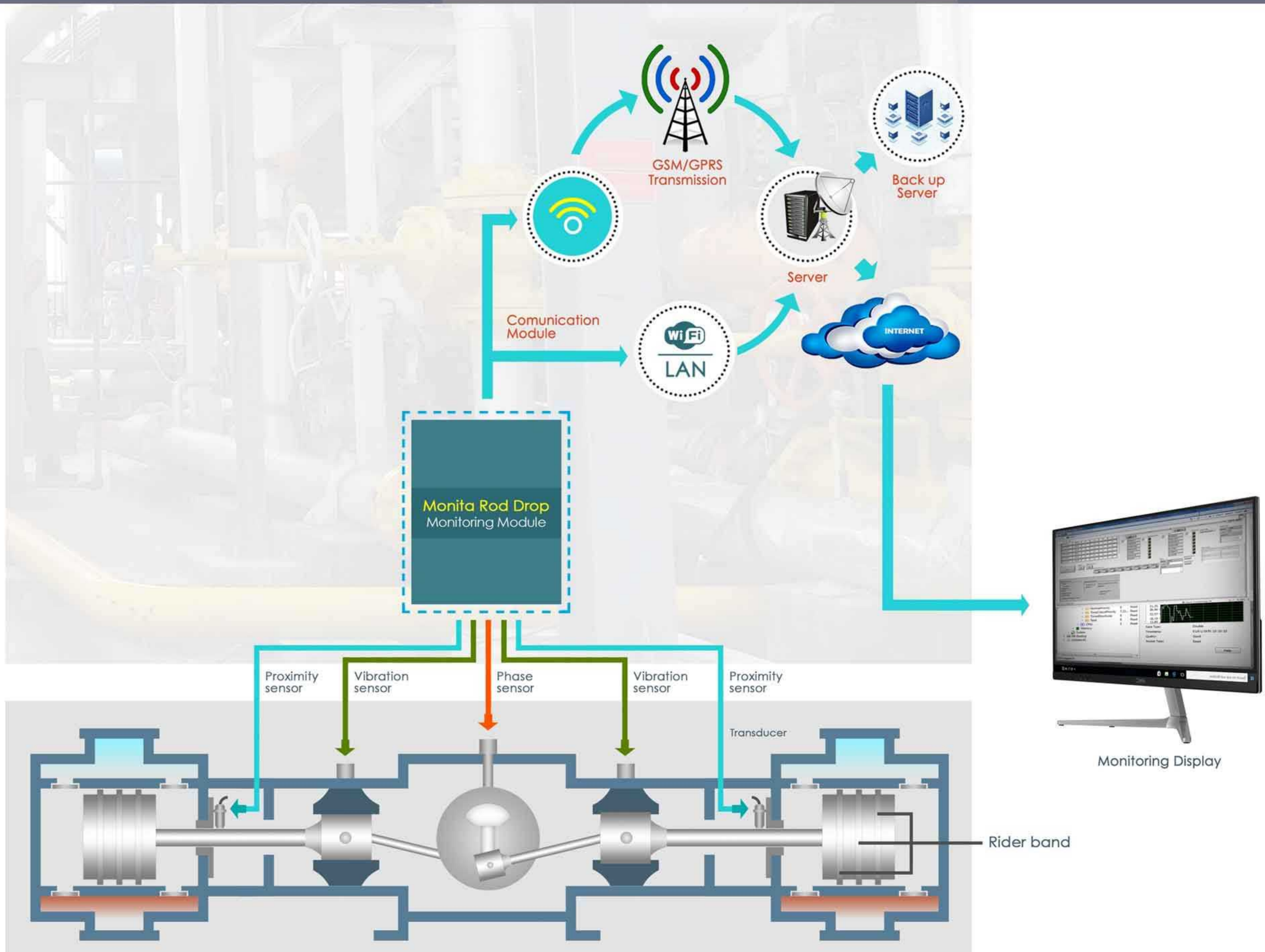


Monita Rod Drop Monitoring Display

Measure actual rod drop position

Analyze rider band wear condition

Improve asset reliability & efficiency





Engineering Services

PT. Daun Biru Engineering

Engineering Service team carries out periodic condition monitoring of equipments, compressors, generators and the like, with the objective of improving asset performance that eventually will be able to predict the life time of a machine.

With the implementation of periodic condition monitoring services, it is necessary to have a training or knowledge sharing of this topic in order to share all the experiences in the field to all stakeholders.



Equipment Diagnostic

(Performance Analysis)

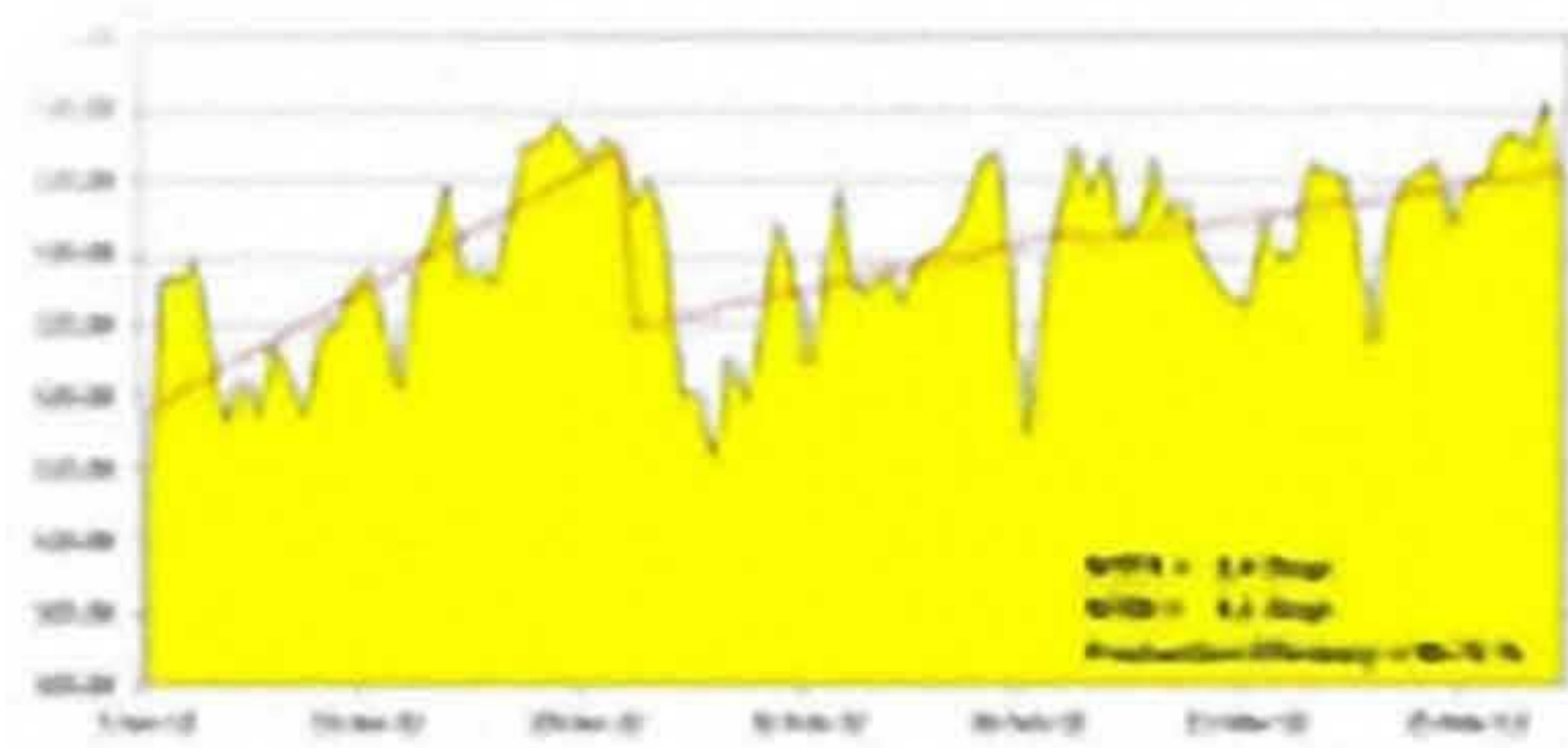
is an activity of measuring, analysing and diagnosing equipment condition based on:

- Vibration Data (*diesel engine, compressor, pump, blower, fan*)
- Combustion Pressure (*diesel engine*)
- Thermography
- Oil Analysis (*tribology*)
- Electrical Analysis

This activity can be done to check the following conditions :

- Testing of newly installed equipment
- Before / after overhaul
- Before / after part replacement
- Before / after system replacement

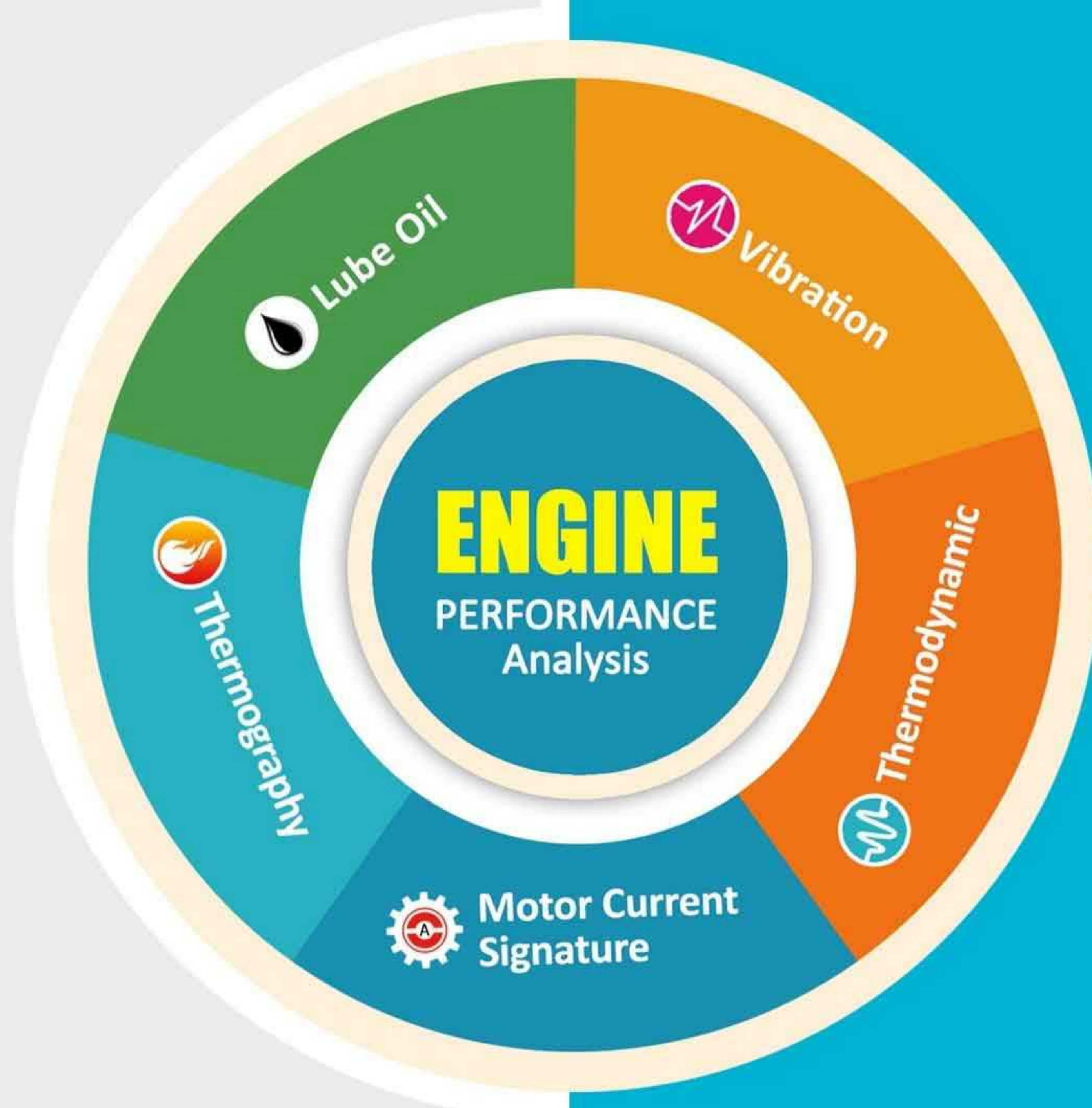




Predictive Maintenance Services (PdM)

includes measurement, analysis and diagnosis of the condition of the equipments that is carried out periodically for a specific time period (1-3 year).

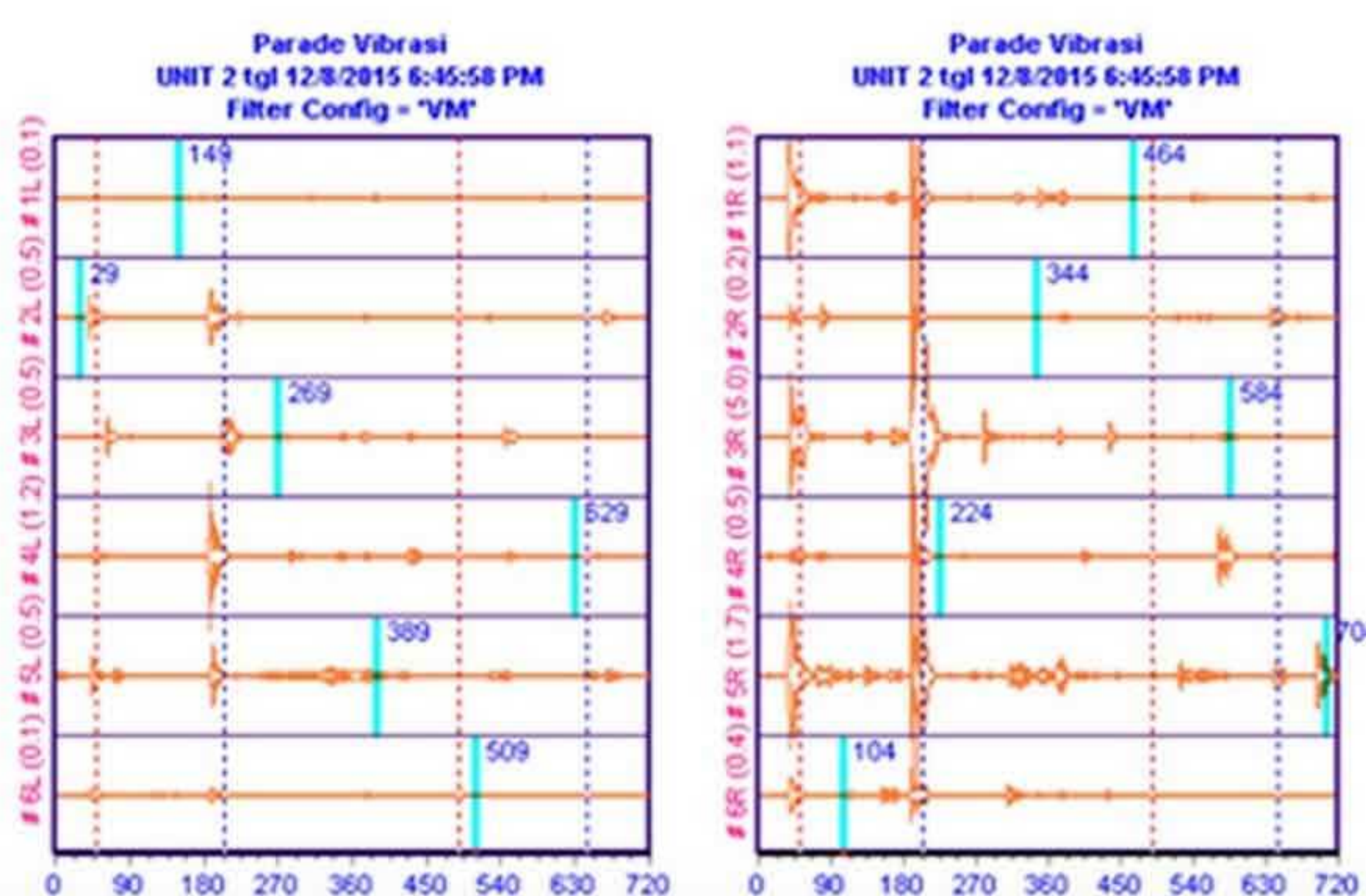
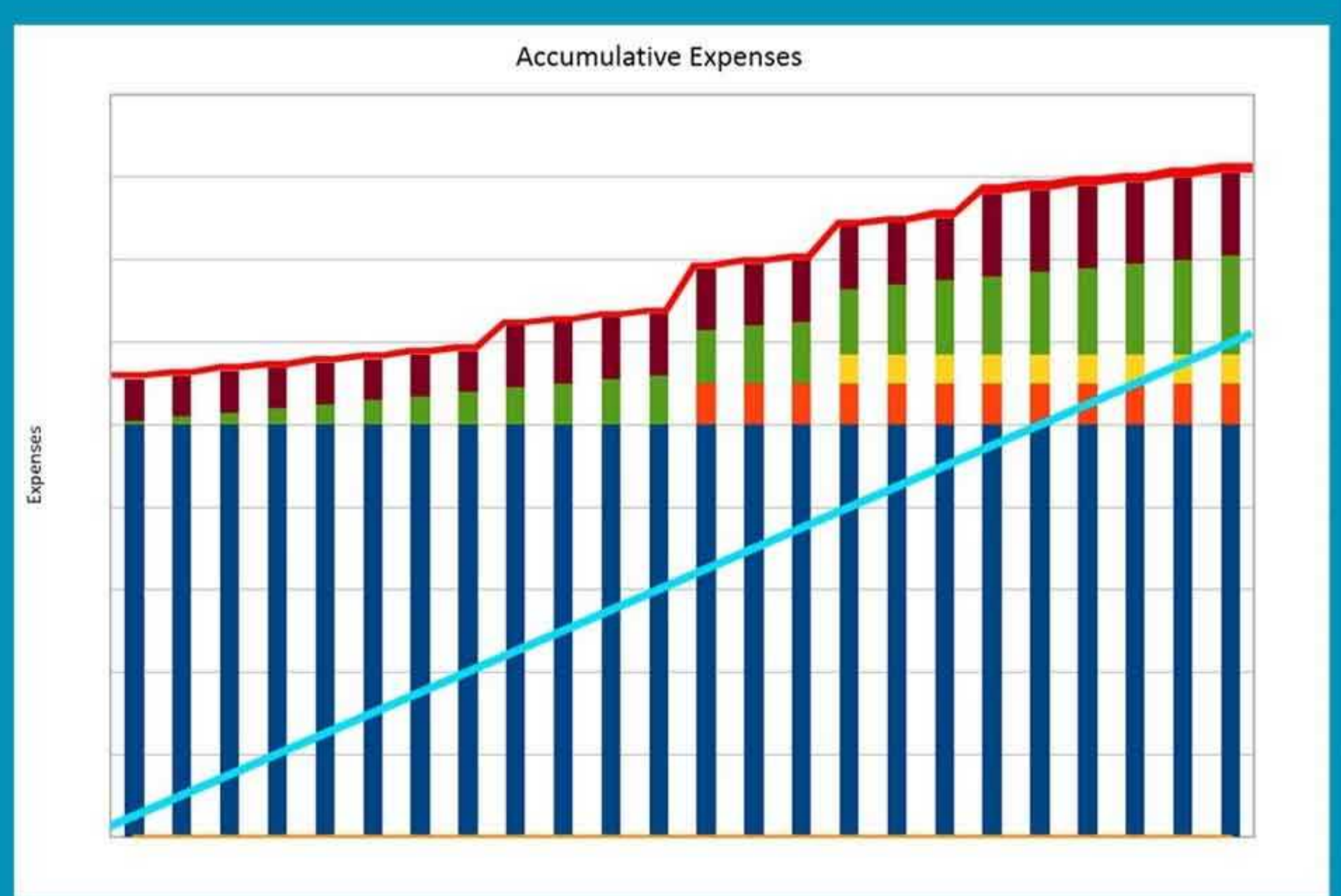
Within this period, trending analysis can be done on the critical parameters to check the reliability and predict the life time of the equipment or its components.



Operational Cost Comparison

NO	Item	Internal Team PdM	Daun Biru PdM
1	Tools Investment	\$\$\$\$\$	-
2	Personnel Cost	\$\$\$\$	-
3	Tools Calibration	\$\$\$	-
4	Tools Maintenance	\$\$	-
5	Training	\$	-
6	Service Cost	-	\$

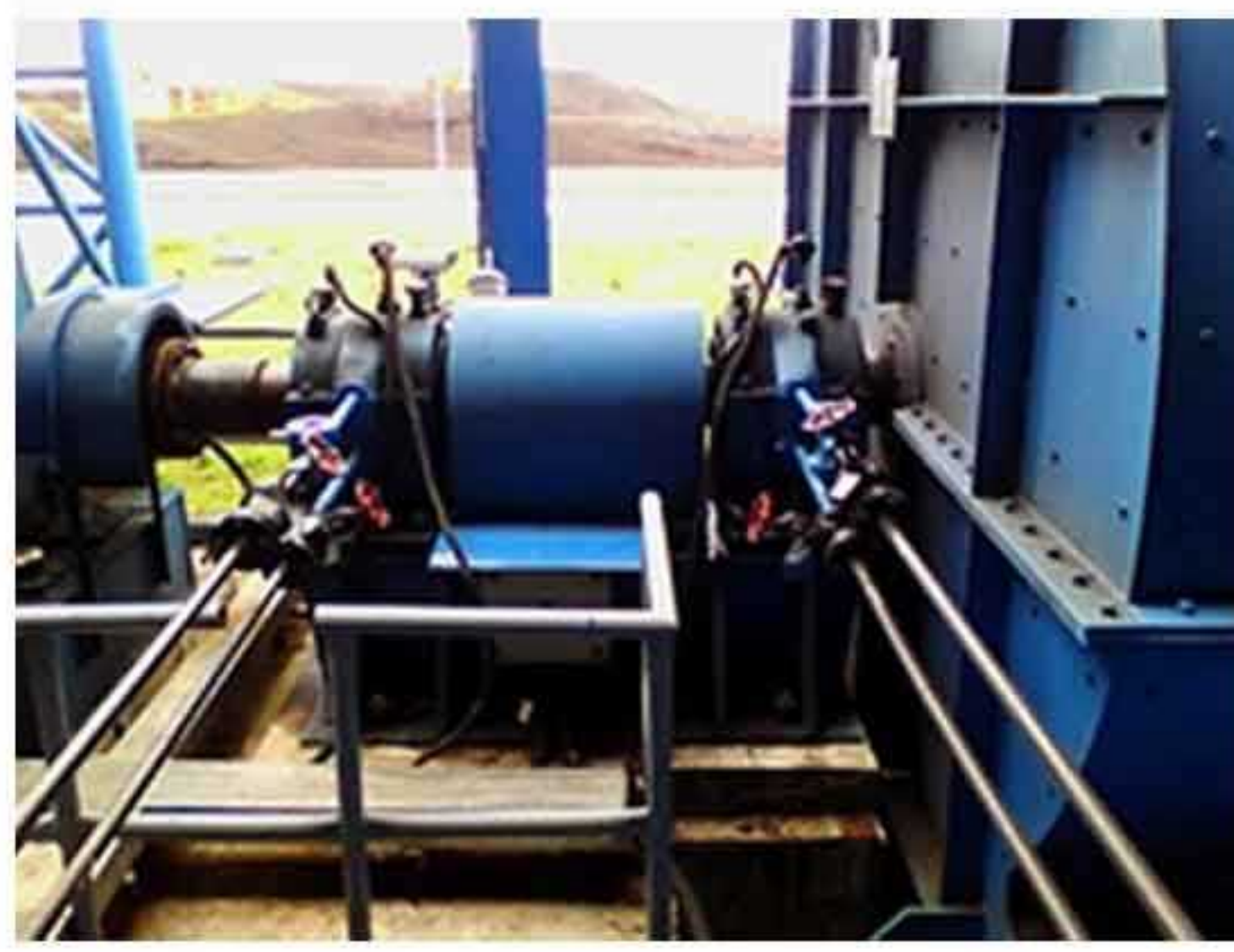
Accumulative Operational Cost Comparison



Vibration Analysis

Mechanical Vibration is very important in showing the condition of the equipment. From vibration data, information that can be obtained are :

- Damage or premature wear on moving components
- Setup error
- Symptoms of abnormal engine conditions



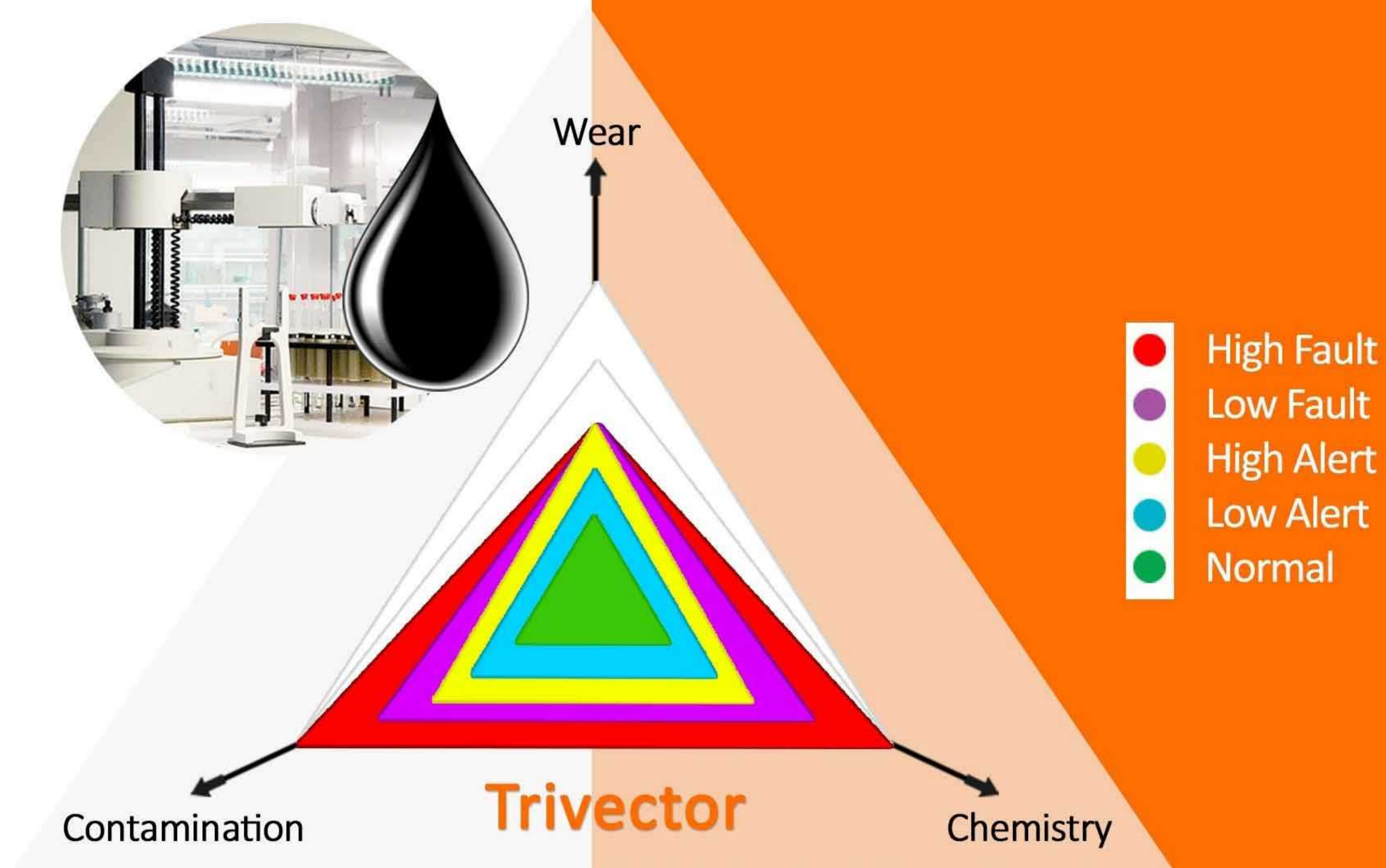
Thermography

Heat/thermal data is an important information to complement condition monitoring of an equipment. Daun Biru provides thermography analysis services using infrared thermography camera to detect hot spots on the equipment surface.

Oil Analysis (Tribology)

Oil Analysis is done by sampling the equipment lubricating oil. Some of the benefits of Tribology are :

- Identify the presence of defects in the system that is not detected by vibration analysis
- Identify any leakage in the oil system or contamination
- Ensuring the quality of current lubricating oil



Advanced Troubleshooting System

Daun Biru Engineering provides troubleshooting service on the equipment / system in the field, such as :

Rotating Machinery :

- Balancing
- Vibration reduction
- Operation pattern analysis
- Failure analysis (reduce repeat failure)
- Electrical analysis

Reciprocating Machinery :

- Vibration reduction
- Equipment efficiency analysis

Engineering Tools

Engineering Service Team uses the following tools & equipments for field measurement and analysis

Mechanical Parameter

1. **Haliza Reciprocating** Machinery Analyzer
2. **Haliza Rotating** Machinery Analyzer
3. **CSI 2130** : Rotating Machinery Analyzer
5. **IRD 258** : Vibration Analyzer with Balancing Capability
6. **DT 9837A** : Multichannel Data Aquisition Module
7. **Fluke Ti32** : Infrared Thermal Camera
8. **Flir E5** : Infrared Thermal Camera
9. **Oil View 5100 Package** : Onsite Lube Oil Analyzer
10. **RPM Turbometer**
11. **Tenmars TM-103** : Sound Level Recorder
12. **Infrared Temperature Gun** (Various brand/model)
13. **Deflection Gauge** (Various brand/model)



Electrical Parameter

1. **Lutron DW6092** :
3 Phase Power Analyzer
2. **Kyoritsu 2009R** :
AC/DC Clamp Meter
3. **Kyoritsu 3225** :
High Voltage Insulation Continuity Tester
4. **Kyoritsu 4105A** :
Portable Earth Resistance Meter
5. **Sanwa CD-800A** :
Digital Multimeter

Maintenance Integrated Technology Solution



Training



To enhance the knowledge about maintenance technology of industrial community, PT. Daun Biru Engineering provides several training packages :

1 Basic Vibration Training

Providing basic knowledge about machinery and equipment vibration in industry .

Training conducted by experienced trainers in the field.

Complete Training with theory and practice, as well as interesting case studies with real data that has been obtained by Daun Biru Engineering Service Team.



2 Intermediate Vibration Training

Providing further knowledge about vibration in industrial machinery and equipment, so participants will get more in-depth knowledge of vibration analysis and troubleshooting.

3 Diesel Engine Diagnostic

Providing knowledge of diesel engine diagnostics: engine vibration, combustion pressure, how to use an analyzer to make recommendations.

Training conducted by experienced trainers in the field.

The training is completed with theory and practice and interesting case studies with real data obtained by Daun Biru Engineering Service Team.





ASSET MAINTENANCE, INSPECTION
AND REPORT APPLICATION

AMIRA will help a company to monitor and manage its assets in much better way. Assets condition recording and reporting will be done in a guided, systematic, structured and reliable way using Amira. With this, company may establish its assets database, and the assets condition will always be updated and managed accurately.



ASSET DATA TRACKING

DIGITAL REPORTING

ASSET ONLINE CONDITION
MONITORING



PT Daun Biru Engineering

Portfolio

PT. Daun Biru Engineering

have been working with various parties to make their business processes better.

Some major business fields:

1 Power Generation & Distribution

- Power generation monitoring system
- Electrical distribution monitoring system
- Condition monitoring of diesel engine generator

2 Oil & Gas

- Condition monitoring services
- Predictive maintenance
- Equipment/engine troubleshooting & performance analysis

3 Marine Transportation

- Condition monitoring of main & auxiliary engines
- Vessel & Fuel Monitoring System

4 Training Institute

- Provision of Vibration Simulator Equipment
- Vibration Analysis Training



Clients



Wilayah Maluku (PLTD POKA)



Sektor Pembangkitan Jaya Pura



Wilayah Dumai



Wilayah Meulaboh



Wilayah Barito



Wilayah Biak



Wilayah Bima



Wilayah Lombok (PLTD Paokmotong)



Wilayah Medan (PLTD Titi Kuning)



Wilayah Bangka - Belitung



Wilayah Ambon (Tual & Ternate)



Wilayah NTB (GI Sengkol)



Certificate of **ISO 14001 : 2015**

ZERTIFIKAT ◆ CERTIFICATE ◆ CERTIFICADO ◆ CERTIFICAT ◆ 認證書 ◆ CERTIFICATE ◆ ZERTIFIKAT



CERTIFICATE

The Certification Body
of PT TÜV SÜD Indonesia
certifies that

PT. DAUN BIRU ENGINEERING
Jl. Raya Pekapuran No. 41
Sukamaju Baru Tapos
Depok 16455
Indonesia

has established and applies
an Environmental Management System for

**Design and Manufacture of Machinery Analyzer
and Online Monitoring System**

Proof has been furnished that the requirements
according to

ISO 14001 : 2015

are fulfilled. The certificate is valid from **2022-05-21** to **2025-05-20**
Certificate Registration No. **2022-2-0028**
Date of Print : **2022-05-23**




Yuan Handayana
General Manager

Page 1 of 1



Certificate of **ISO 9001 : 2015**

CERTIFICAT

CERTIFICADO

СЕРТИФИКАТ

認證證書

CERTIFICATE

ZERTIFIKAT



CERTIFICATE

The Certification Body
of PT TÜV SÜD Indonesia
certifies that

PT. DAUN BIRU ENGINEERING
Jl. Raya Pekapuran No. 41
Sukamaju Baru Tapos
Depok 16455
Indonesia

has established and applies
a Quality Management System for

**Design and Manufacture of Machinery Analyzer
and Online Monitoring System**

Proof has been furnished that the requirements
according to

ISO 9001 : 2015

are fulfilled. The certificate is valid from **2022-06-27** to **2025-06-26**
Certificate Registration No. **2016-1-0206**
Date of Print : **2022-06-08**



Yuan Handayana
General Manager



Page 1 of 1



Achievement: Certificate From **Chevron**



Achievements:

COC of **EMI Immunity & IP 65**



Certificate No. 42172/DBBPAI
Date: April 28, 2015



Issuing Office:
Jl. Arteri Tol Cibitung No. 1, Cibitung Bekasi 17520, Indonesia
Phone/Facs: +62 21 88321176/88321166
Email: jum.cbt@sucofindo.co.id

REPORT OF TESTING

The sample was submitted by client with the following identification:

CLIENT	: Daun Biru Engineering, PT.
ADDRESS	: Jl. Raya Pekapuran No. 41 Sukamaju Baru, Tapos Depok 16455
NAME OF SAMPLE	: Haliza Analyzer
SPECIFICATION	: Machinery Analyzer
MANUFACTURER	: Daun Biru Engineering, PT.
TEST REQUIRED	: EMC / EMI Emission Immunity & IP 65
METHOD	: IEC 61000 : 2013 & IEC 60529:2001
RECEIVING DATE	: April 7, 2015
TESTING DATE	: April 7 - 10, 2015
JUDGEMENT	: COMPLY

The Attachments available are integral parts of this certificate.

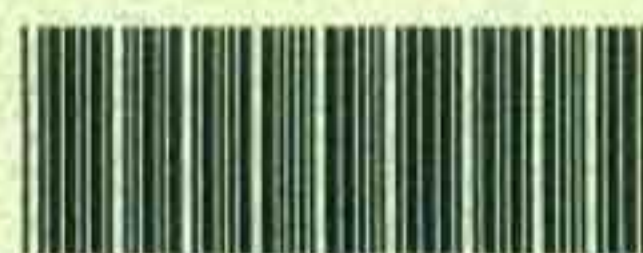
This Certificate/report is issued under our General Terms and Conditions, copy of which is available upon request or may be accessed at www.sucofindo.co.id

CBT200061315-000

SBU Laboratorium



Fitri Muhamady
BP




1960785

SCI-2007A



Achievement:

TKDN Haliza

 **Kementerian Perindustrian**
REPUBLIK INDONESIA

TANDA SAH CAPAIAN TINGKAT KOMPONEN DALAM NEGERI

Sesuai dengan Peraturan Pemerintah Nomor 29 Tahun 2018 tentang Pemberdayaan Industri, Peraturan Presiden Nomor 12 Tahun 2021 tentang Perubahan atas Peraturan Presiden Nomor 16 Tahun 2018 tentang Pengadaan Barang/Jasa Pemerintah, dan Peraturan Menteri Perindustrian No. 22 Tahun 2020 tentang Ketentuan dan Tata Cara Penghitungan Nilai Tingkat Komponen Dalam Negeri Produk Elektronika dan Telematika, hasil verifikasi atas Capaian Tingkat Komponen Dalam Negeri (TKDN) adalah sebagai berikut:

Jenis Produk	:	Machinery Analyzer
Tipe	:	-
Spesifikasi	:	Reciprocating & Rotating Machinery Analyzer
Kode HS	:	90248010
Merk	:	HALIZA
Nilai TKDN	:	36,75%
Terbilang	:	Tiga puluh enam koma tujuh lima persen
Standard Produk	:	-
Sertifikat Produk	:	-
No. Laporan	:	PTKDN - 2220 - 2201155


yang telah ditandatangani oleh Kementerian Perindustrian dan berlaku 3 tahun terhitung sejak tanggal tanda sah,

diberikan kepada:

Nama Perusahaan	:	PT. Daun Biru Engineering
Alamat	:	Jl. Raya Pekapuran Nomor 41, Desa/Kelurahan Sukamaju Baru, Kec. Tapos, Kota Depok, Provinsi Jawa Barat
NPWP	:	02.436.235.2-412.000
Jenis Industri	:	Industri Alat Ukur dan Alat Uji Manual (KBLI: 26511)
No. Tanda Sah	:	2775/SJ-IND.8/TKDN/7/2022


Jakarta, 1 Juli 2022

Kepala Pusat Peningkatan Penggunaan Produk Dalam Negeri


Nila Kumalasari



#31385



Achievement:

TKDN Monita



Achievement:

Award Service Team



Achievement:

Certificate From **SKK Migas**



Achievement:

Certificate From **PT Pakarti Tirtoagung**

Letter Of Appreciation

No : 826 / UM / PTA / XII / 19

To :

PT. DAUN BIRU ENGINEERING

On behalf of the PT. Pakarti Tirtoagung Management, I hereby would like to express our sincere appreciation and thanks for the excellent support provided by you and your staff who were giving a great of contribution and cooperation to our Contract of

*“Provision of Operation Maintenance Management Services
on Kakap Platform Contract No. 4200001714 ”
Star Energy*

Since 23 March 2016 until 26 November 2019

Thank you for your gracious hospitality and professionalism.

Jakarta, 10 December 2019



Sony Suryadi
Ops/Project Manager



Hariyanto Ashari
Operation Director



Priyo S. Brodjonegoro
President Director



PT Daun Biru Engineering

Jl. Raya Pekapuran No.41 Tapos, Depok 16455 - Indonesia
Phone +62-21 87743652 | +62-21 87743615, Fax +62-21 87743634, sales@daunbiru.com
(2020-07.E-CP.06)