

MACHINERY & ENGINE SOLUTIONS (MES)



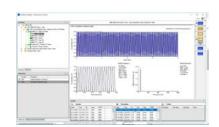
ASSET MONITORING & HEALTH ANALYSIS SOLUTIONS (AMS)

Implement predictive intelligence and integrated protection technologies to reach business goals and achieve top-quartile reliability. With AMS technologies, you get asset management and condition indicator capabilities specific to the nature and criticality of production assets.

VIBRATION ANALYSIS SOFTWARE

AMS MACHINE WORKS / AMS MACHINERY MANAGER **MACHINE WORKS / AMS MACHINERY MANAGER**

Combines predictive maintenance techniques with comprehensive analysis tools to provide easy and accurate assessment of the machinery health in the facility. The monitoring solution and/or device you choose will determine what software is right for your operation. Also available as a SaaS or Cloud-hosted software option.



PORTABLE DEVICES

AMS 2140 MACHINERY HEALTH ANALYZER

- Route-based machinery health analyzer
- · 4-Channel + Tri-axial Phase/Tachometer
- · PeakVue predictive diagnostics
- Wi-Fi, Bluetooth, Ethernet, and USB 2.0
- CSA Class 1 Div. 2. ATEX Zone 2
- IECEx Zone 2

AMS TREX DEVICE COMMUNICATOR

- Commission, diagnose, and troubleshoot HART and Fieldbus devices
- Bluetooth and Wi-Fi compatible
- Powers HART loops and Fieldbus devices directly
- · Auto Sync with AMS Device Manager
- · Full-shift battery life, 32GB of storage
- IP 54 Housing, ATEX/CSA/IECEx/FISCO Approved





WIRELESS MONITORING SOLUTIONS

AMS WIRELESS VIBRATION MONITOR

- · Tri-axial Vibration + Temp Sensor
- 13 Trend Values
- PeakVue and embedded prescriptive analytics
- Secure WirelessHART® Mesh Network
- · CSA Class 1 Div.1 / IP66 / NEMA 4x Enclosure

AMS 9420 WIRELESS VIBRATION TRANSMITTER

- Vibration + Temp sensor
- · Battery or line powered
- Secure WirelessHART® Mesh Network
- CSA Class 1 Div. 1 / IP66 / NEMA 4x Enclosure

WIRELESS GATEWAYS

- · Up to 100 devices per wireless gateway
- · Integrate with any DCS
- Secure WirelessHART® Mesh Network
- Modbus TCP, Modbus RTU, and OPC
- CSA Class 1 Div. 2 / IP66 / NEMA 4x Enclosure



CONTINUOUS MONITORING SOLUTIONS

AMS ASSET MONITOR (EDGE ANALYTICS DEVICE)

- · Prediction, protection, and process analyzer
- Embedded prescriptive analytics
- 12-Channel w. CHARMs I/O technology
- Wired or Wireless Ethernet
- CSA Class 1 Div. 2, ATEX Zone 2

AMS 6500 MACHINERY HEALTH MONITOR

- Online condition and prediction
- PeakVue predictive diagnostics
- 24 channels, multiple assets
- Modbus, XML Data Transfer, OPC DA, etc.
- CSA Class 1 Div. 2, ATEX Zone 2
- IECEx Zone 2

AMS 6500 ATG PROTECTION + PREDICTION

- Online protection system for critical assets
- PeakVue predictive diagnostics
- OPC UA, Modbus TCP/IP and Modbus RTU
- API 670 compliant
- CSA Class 1 Div.2



AMS 6300 SIS DIGITAL OVERSPEED PROTECTION

- · 3-Channel safety system for critical rotating assets
- Supports eddy current measuring chains
- SIL 3 rotational speed measurement
- · SIL 2 rotational direction detection
- PC Configurable and Profibus



AMS EZ1000 EDDY CURRENT CONVERTER

- Supports all sensor types and cable lengths
- · Easy on-site calibration and configuration
- · API 670 compliant
- CSA Class 1 Div. 2, ATEX Zone 2



SENSORS & CABLES

• We offer a wide array of sensors and cables for various applications and hazardous ratings.

PORTABLE EMISSION ANALYZERS AND ACCESSORIES

ECOM

Multi-gas analyzers for Engines, Turbines, and Boilers used for tuning, diagnostics, general and compliance testing

ECOM-B, CL2

2 gas analyzer

ECOM-D

3 gas, diagnostic and tuning analyzer

ECOM J2KN

Advanced, multi-gas analyzer



SERVICE & SUPPORT

PROJECT SERVICES

- System Inspection / FEED Studies
- Project Management
- API 670 Machinery Protection System Design
- Factory Acceptance Testing (FAT)
- Site Acceptance Testing (SAT) Process Startup Support
- System Commissioning
- Vibration Database Services

CONSULTING SERVICES

- Vibration Program Development
- Root Cause and Consultation
 - **Motion Amplification Studies**
 - Operational Deflection Shape (ODS) Studies
- Flow Induced Vibration (FIV) Studies
- Failure Mode and Effects Analysis (FMEA)
- **Dynamic Pressure Studies**
- Valve Noise & Fatigue Studies
- **Education and Certification Offerings**

RUN AND MAINTAIN SERVICES

Embedded Predictive Maintenance Contracts

Balancing and Alignment Support

- Remote and/or Onsite Data Analysis
- Local Oil/Grease Lab Sampling and Analysis
- Turbomachinery Analysis
- Infrared Thermography Testing
- **Electrical Motor Field Testing**
- Lifecycle Care **Emergency Support**

24/7 SERVICE 225-751-3788 JOHNHCARTER.COM

MACHINERY & ENGINE SOLUTIONS LOCATIONS Lafayette Office

Corporate Office Sales/Service 17630 Perkins Rd. Baton Rouge, LA 70810 225-751-3788

Sales/Service 401 Wall St. Lafavette, LA 70506 337-233-8331

Sales/Service 28 N. Arnoult Rd Metairie, LA 70002 504-887-8550

Metairie Office

Sales/Service 2203 Perimeter Rd. Ste 300 Mobile, AL 36615

Mobile Office

251-653-9898

Sales/Service 9656 St. Vincent Ave. Shreveport, LA 71106 318-861-0168

Shreveport Office













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MACHINERY & ENGINE SOLUTIONS (MES)



COMBUSTION MANAGEMENT AND AUTOMATION SYSTEMS

REMVUE

Full Automation with Combustion Management for Advanced Applications

- · Combustion Management using advanced algorithms, resulting in the tightly controlled emissions with the lowest BSFC,
- Advanced algorithms support varying fuel BTU contents
- Start/Stop Sequencing
- Digital Speed Governing
- Load Control
- Advanced Diagnostics
- Emissions tracking and reporting

System Upgrades

REMVue 300 to 505

· Field replacement for older R300 systems with minimal downtime

REMVue 300 to 505

- · Field replacement for older R300 systems with minimal downtime
- In-field replacements of legacy Millennium systems using the latest PLC control platform



COMPRESSOR VALVES, PACKING AND COATINGS

COMPRESSOR PRODUCTS INTERNATIONAL

Compressor Valves and Packing

Hi-Flo™ RS Valve (Replaceable Seat Valve)

- Replaceable seat eliminates wear to the valve housing, eliminating the need for off-site reconditioning,
- · Radiused disc ring design provides better gas flow, and allows processing of gases that contain debris and liquid slugs.
- Reduces the need for spare valve inventory and operating costs.

Hi-Flo™ RD Valve (Radiused Disc Ring Valve)

- · Feature aerodynamic radiused profiled rings providing increased efficiency, reduced power consumption and reliable operation where temperatures and pressures
- Aerodynamic rings allow the free passage of foreign material and liquid slugs.





Compressor Valves and Packing

EMISSIONGUARD™ TR2 Packing Ring

EMISSIONGUARD™ TR² packing ring multiplies the benefits of a tangent to rod ring and a step tangent ring by combining the two rings into one, providing a more efficient seal, reduced friction and extended lifetime.

Compressor Valves and Packing

FivealloyTM Coatings

Fivealloy™ coating and plasma spray process is an ideal method for repairing compressor piston rods, cylinders and cylinder liners to better-thannew condition, in many cases as an alternative to replacement where the component could not be otherwise repaired.





COMPRESSOR LUBRICATION SYSTEMS

COMPRESSOR PRODUCTS INTERNATIONAL

Lubricator Pumps and Gearboxes for Engines and Compressors

Proflo® EOS

· Self-adjusting lubrication pump system which monitors oil flow, automatically adjusts for pump wear and allows for remote control of flow rates based on unit conditions

OE Style Gearboxes

 Lubricator boxes and pumps for OE applications using P55U series pumps.

HVLP Pump Systems

• The High Volume Lube Pump (HVLP) delivers precise quantities of lubrication

HD Divider Blocks

· HD Divider blocks proportion precise amounts of lubrication while reducing the number of potential leakage points in the system

Pressure Relief, Filtration and Accessories

Pressure Relief

· Pop Open Pressure Relief (POPR) is accurate, repeatable, and resettable which replaces old rupture discs

Filtration

· Hi and Lo pressure filtration units insure the longest like from your lubrication system

We offer field support ranging from PMs to complete system retrofits









DIESEL ENGINE CONTROLS AND INSTRUMENTATION

ENOVATION CONTROLS

Controls and Displays for Mechanical and Electronically Controlled Engines

PowerCore Controllers

Ready-to-Run (RTR) Control Panels

CANBus ready controls for pumps, generators and mechanical drives

PowerVision Controller and Displays

Controls and Displays for Stationary and Marine Engines

MGC Series Generator Controls

Controls for single and multiphase generators

End Devices

- Thermocouples and RTDs
- Pressure senders and transmitters
- Level displays, controllers and alarms
- Fuel Solenoids, Air Shutoffs, and Rack Pullers

STARTING SYSTEMS FOR ENGINES **AND TURBINES**

TECH DEVELOPMENT (TDI)

Turbine Air Starters, Regulators and Accessories for Engines from 5 to 100 Liters

T6/T7 Series

State of the art starters for reciprocating engines lowest weight to HP ratio

T30, T50 and T100 "TurboTwin" series

· Inertia, Pre-Engaged, and Gas Turbine applications, industry's most efficient starter

Starter REMAN programs

Core based program that keeps spare units onsite and ready for use





SERVICE & SUPPORT

Factory trained and accredited

SHOP SERVICES

- **Ignition System Testing**
- Ignition and Thermocouple Header systems
- Lubrication System component testing
- **Engine Starter Repairs**
- Panels and FATs

FIELD SERVICES

- Panel installations and commissioning
- **REMVue and Murphy Panel Retrofits**
- PMs and Reciprocating Machinery analysis (both portable and online systems)
- Ignition and AFR system troubleshooting and
- **Emissions Testing and tuning**
- Lubrication System PM, troubleshooting and installations
- **Engine Starter installations**

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