Asset Management and Energy Efficiency Toolkit

Artesis (Asset Management Toolkit) AMT is an Asset Management and Energy Efficiency Toolkit which use three phase voltage and current signals to diagnose existing electrical and mechanical problems.

Check-Up for Motor Driven Equipment. Routine check-up and early diagnosis of equipment prevents catastrophic damages and helps to reduce energy consumption and operating costs.

How It Works

Artesis AMT is equipped with a computer, a fully functional AES for AMT Software, current transformers, and cables. Artesis AMT is connected to motor cables using clamp on current sensors and voltage cables. It collects data from motor driven systems and saves them to the SQL database. At the end of the testing period, the toolkit generates a condition assessment report which indicates existing faults of the system, time to failure information, recommended corrective actions, and effects of these faults on energy efficiency.

Fault Coverage

Loose foundation/ components
Unbalance/misalignment/coupling
Transmission faults
Driven equipment faults
Bearing faults
Rotor faults
Stator/insulation faults
Voltage unbalance
Current unbalance
Internal and external electrical faults

Process Faults

High energy consumption
Low efficiency
Cavitation in pumps
Flow turbulence in fans, blowers
Filter and heat exchanger fouling
Lubrication
Oversize/undersize motors

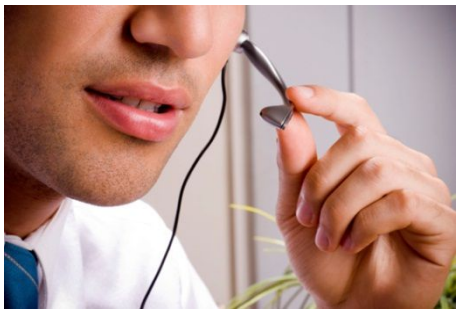
Parameters

RMS values of three phase voltages and currents
Frequency
Power factor
Active power
Reactive power
Total Harmonic Distortion
Harmonics up to 13th
Voltage and current balances

IMMEDIATE PAYBACK!
Taking corrective action for existing equipment faults will eliminate unplanned downtime, improve energy efficiency, reduce maintenance cost and extend equipment life time.

ENERGY CONSUMPTION
Motor driven systems consume 66% of the electrical energy in an industrial plant. Any improvement can yield considerable amount of energy saving.

OPERATIONS AND MAINTENANCE
It has been estimated that Operations and Maintenance programs targeting energy efficiency can save up to 20% on energy bills without a significant capital investment. From small to large sites, these savings can represent thousands to hundreds-of-thousands of dollars each year, and many can be achieved with minimal cash outlays (***U.S. Department of Energy***).



Artesis

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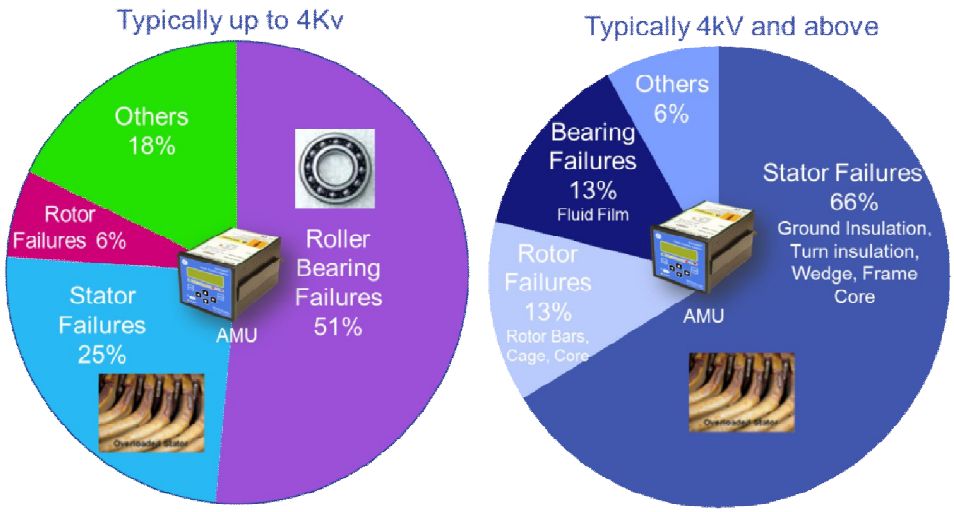

Distribution of Electric Motor Failures

SECTORS

Oil & Gas
Energy
Cement
Metal
Pharmaceutical
Automotive
Water
Transportation
Food & Beverages
Buildings

APPLICATIONS

Compressors
Fans
Pumps
Conveyors
Generators
Motor Driven Equipment

DIMENSIONS

550x310x190mm

Key Benefits

Immediate payback by corrective action
Instant condition assessment report
Advanced analysis and reporting
No sensors on motor or equipment
Improved efficiency and reliability of plant & processes
Increased machine availability

Software Features

AES for AMT Software
Classification of data into companies and motors
Instant Condition Assessment Report
Instant PSD download for

Current Transformers

4 sets split-core current transformers 400/5A, 300/5A, 200/5A, and 100/5A, Class 1
Frequency range 50/60 Hz
System rated voltage 0.72/3kV
Isolation voltage 3kV (1 minute)
Continuous current 1.2xrated current

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