CONDITION ASSESSMENT REPORT

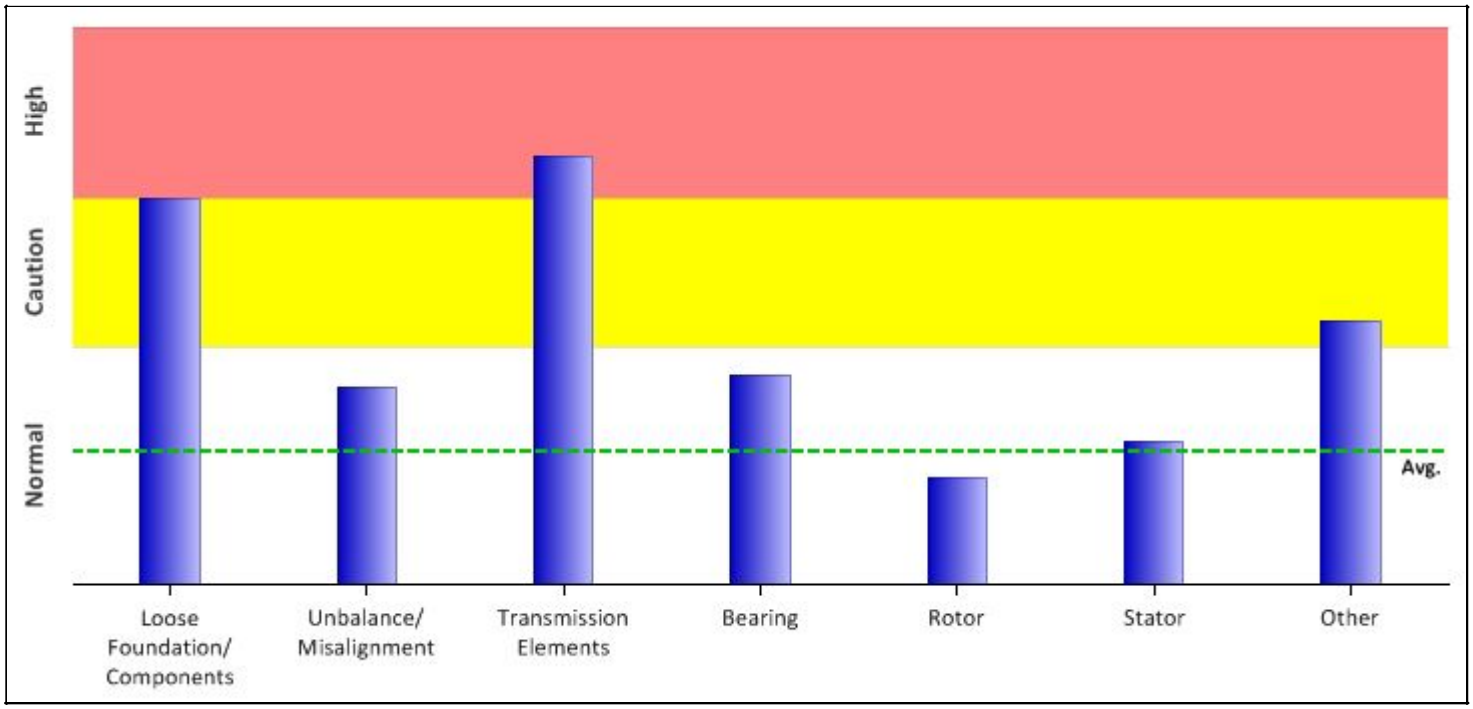
PROCESS ANALYTIK INSTRUMENTS

Equipment Name	BLOWER FAN	**Nominal Voltage (L-L)**	398 V
Equipment Type	Fan	**Nominal Current**	298 A
Date	2014-05-29 11:53:09	**Motor Speed**	1485 rpm
Frequency	50 Hz		

Detected Faults and Warnings	Effects on Energy Efficiency (kWh)
Loose Foundation/ Components	14410
Transmission Elements	72049
THD	14410
TOTAL	**100869**

Detected faults and their effects on energy efficiency

☑ Corrective maintenance action will save energy up to 100869 kWh per year, increase productivity, reduce maintenance cost, and increase equipment life time.



Comparison of the equipment with other equipment monitored by MCM

☑ **WATCH EXISTING FAULTS** These faults should be checked for verification and corrective action should be taken at the next scheduled maintenance but no later than three (3) months.

Mechanical Faults

☑ Looseness / foundation. Check for loose motor foundation, loose motor components, looseness or excessive tolerances in driven components. ***EEE:*** *Mechanical faults such as misalignment, physical looseness and unbalance not only adversely affect a motor's performance and longevity but also its efficiency.*

☑ Belt/Blade/Trans. element/Driven equipment. Check for transmission element(s), coupling, driven equipment, belt, pulley, gear box, and fan/pump impeller. ***EEE:*** *Efficiency is dependent on pulley size, driven torque, under or over belting, and V belt design and construction. Efficiency deteriorates by as much as 5% over time if slippage occurs.*

☑ Other. PSD (Power Spectral Density) plot indicates abnormalities. Faults should be identified by checking trends, PSD, and diagnostic help. Alternately email artesis@artesis.com.

Status	Name	Value
OK	Power Factor	0.91
OK	Active Power [kW]	133
OK	Reactive Power [kVar]	58
OK	Vrms (L-L) [V]	348
OK	Irms [A]	246
OK	V Unbalance [%]	0.08
OK	I Unbalance [%]	2.0
OK	Frequency [Hz]	50
Watch	THD [%]	8.4
OK	3th Harmonic [%]	0.32
OK	5th Harmonic [%]	0.37
OK	7th Harmonic [%]	2.4
OK	9th Harmonic [%]	4.1
OK	11th Harmonic [%]	0.30
OK	13th Harmonic [%]	4.6
WATCH ELECTRICAL VALUES	Electrical values are outside of their expected range. They should be noted and watched to identify the cause.	

Electrical Parameters

☑ **WATCH ELECTRICAL VALUES** Electrical values are outside of their expected range. They should be noted and watched to identify their cause.

Harmonic Distortion

☑ There is high harmonic distortion. If Total Harmonic Distortion (THD) is more than 5%, this causes heating, and vibration. A high third harmonic can cause heating in the stator windings. A high fifth harmonic can cause vibration. Use harmonic filter if feasible. ***EEE:*** *Harmonic distortion causes loss in energy efficiency up to 1%.*

EEE: *Effects on Energy Efficiency*

Optional frequency spectrum plot for advanced users