



**machinemonitor™**

# Corporate Presentation

Issue Date September 2011

# Presentation Outline

- Our Company
- Our Market
- Engineering Services – Inspection, Test & Audit
- Our Products
- Our Resources
- Our Differentiation
- Benefits and Savings

machinemonitor™ is an independent consulting engineering company that has particular expertise in providing management solutions for electrical rotating machines and auxiliary plant

We understand electrical plant

# Our Purpose

Is to deliver benefits through:

- Quantified asset condition and trend analysis
- Targeted and effective maintenance recommendations
- Lower operating and business risk costs
- Failure investigations and expeditious recovery plans
- Inspection, test and audit programs
- Providing electrical asset management products

# Our Vision

To become a globally branded  
company pursuing excellence  
in electrical asset management

# Our Mission

To deliver tangible benefits  
through independent electrical asset  
management solutions

# Our Market

- Minerals Mining and Processing
- Power and Water Utilities
- Pulp and Paper
- Cement
- Oil and Gas

# Engineering Services

## Consulting

- Machine design & selection
- Design reviews
- Repair & replacement specifications
- Remnant life studies
- Failure Investigations
- Operational Assessments
- Maintenance plans

## Application

- High Voltage Motors
- Generators
- Business Critical DC Motors
- Business Critical LV Motors
- Transformers



# Inspection Services

## Scope of Services

- In-situ visual inspections
- Bearing inspections
- QA surveillance – onsite
- Wedge tightness surveys
- Thermography inspections

## Application

- High Voltage Motors Generators
- Business Critical DC Motors
- Business Critical LV Motors
- Transformers
- Switchgear



# Testing Services

## Services

- AC & DC Hipot
- Insulation Resistance
- Polarisation Index Test
- Di-electric Dissipation Factor Test
- TVA Probe Test
- Off-line Partial Discharge (PD) Testing
- Recurrent Surge Oscillograph (RSO)
- Rotor Impedance Test
- On-line PD Test
- On-line rotor flux test
- Current Spectrum Analysis
- Open Circuit Test
- EL-CID Test (Stator Core Test)
- Core Lamination Tightness
- Mechanical Impact – stator endwinding resonance
- Impedance Symmetry testing

## Application

- High Voltage Motors
- Generators
- Business Critical LV Motors
- Transformers
- Switchgear



# Audit Services

## Services

- Factory witness testing
- Compliance audits
- Design audits
- Site audits
- Energy and Efficiency audits



## Application

- High Voltage Motors
- Generators
- Winder Motors
- Business Critical LV Motors
- Transformers
- Switchgear



# Repair Management

## Services

- Technical review and evaluation of tender submissions
- Oversee subcontractor performance
- Work verification according to specification and standards
- Work progress monitoring against milestones
- QA surveillance
- Witness testing

## Application

- Motors (AC & DC)
- Generators
- Switchgear
- Transformers
- Driven equipment
- Other rotables



# Risk Management

## Services

- Factory witness testing
- Machine life cycle modelling
- Qualification of machine operational risk
- Determination of machine failure mechanisms
- Designing targeted maintenance programs
- Putting control back into the hands of machine operators and managers



## Application

- High Voltage Motors
- Generators
- Winder Motors

## Features

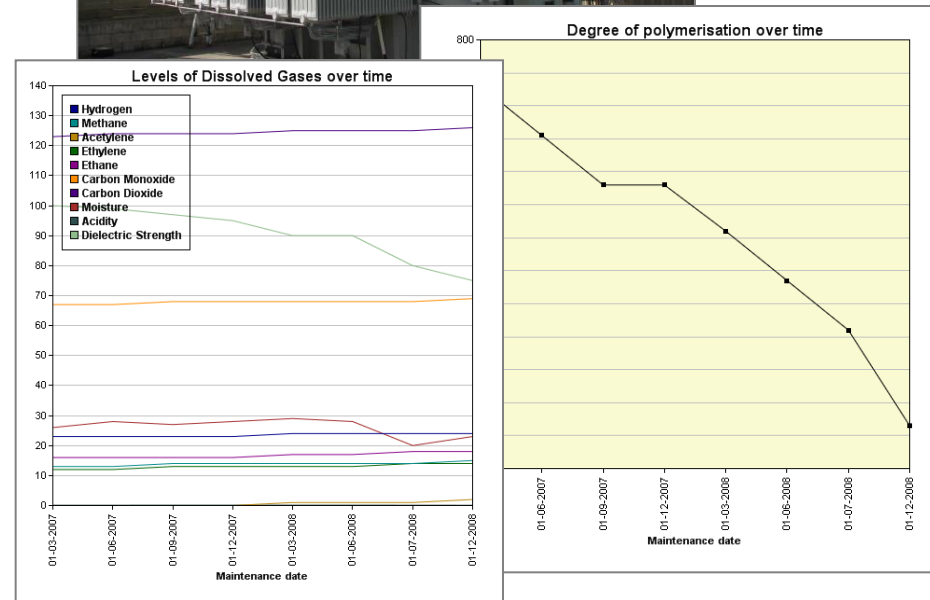
- Proven program
- Scenario planning programs
- Maintenance inspection procedures
- Pro-active maintenance programs
- Inventory management program
- Life cycle cost control management
- Increased confidence through understanding risk



# Products

## Tx Monitor

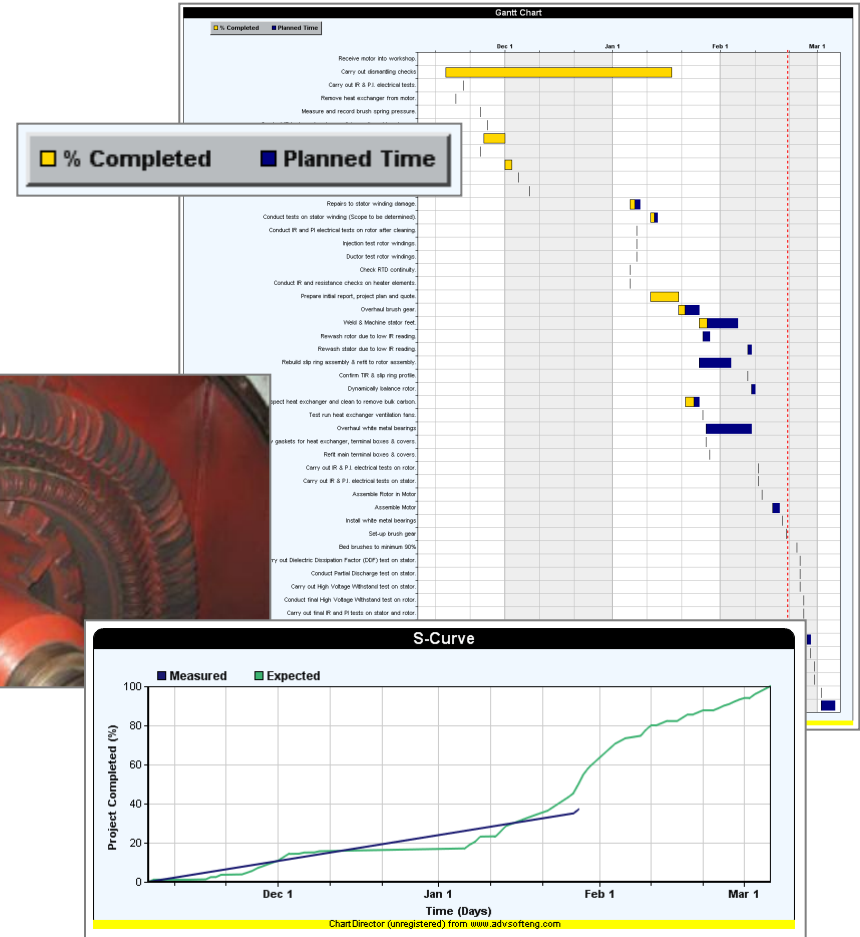
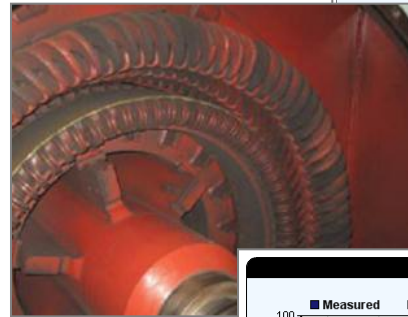
- Life cycle transformer management tool
- Stores asset design, maintenance, operational and test data against individual items of plant
- Allows powerful benchmarking of key condition indicators across site or company wide – see where your emerging problems are!
- Permits remaining life benchmarking
- Applies to other associated assets such as bushings, tap changers, switchgear & switchboards at the “Click of a Button”
- Expert peer review for each asset



# Products

## Repair Monitor

- A web based management tool which permits users to have visibility and control over off-site rotatable repairs
- Tracks repairs through all stages
- Monitors vendor on costs and program
- Compliance checking against technical specification
- Captures repair histories automatically
- Expert peer monitoring by a repair specialist on each asset under repair



# Products

## Risk Monitor

- Life cycle “Business Critical” rotating electrical machine management tool
- Stores asset design, operational, maintenance and test data against individual items of plant
- Benchmarks machines on risk
- Allows powerful benchmarking of key condition indicators across site or company wide – see where your emerging problems are!
- Displays failure mechanism matrices for individual assets allowing targeted and effect maintenance strategies
- Expert peer review for each machine



# Expert Resources

## In Your Business

- Dedicated specialist resource
- Working locally
- Ensuring the suite of machinemonitor™ products and services are effectively delivered
- Cost effective extension to skill base and expertise in your business
- Outage and Project Management Support

## In Your Region

- Regional specialist resource
- Available to deploy to your business on agreed schedules
- 24/7 machine support
- Extended support linked to our specialist team of machine professionals



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