

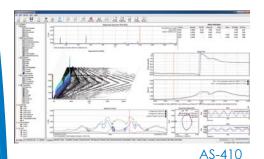
Metals / Refining







## Cutting Edge Technology at Work for You CONNECTING YOUR BUSINESS TO THE INFORMATION YOU NEED



## ALTA ADVANTAGES

- INTEGRATION WITH EXISTING
  PLANT INFRASTRUCTURE
- SYNCHRONIZE PROCESS DATA
  WITH MACHINE DYNAMIC DATA
- OFF-LINE ANALYSIS WITHOUT
  HAVING TO RE-CAPTURE DATA
- REAL-TIME DATA COLLECTION
- ADVANCED VIBRATION AND
  TRANSIENT ANALYSIS
- INTELLIGENT ALARMING
- CYBERSECURE



Alta Solutions was incorporated in 1996 and has extensive experience in vibration monitoring, analysis, and protection. Currently monitoring over 1,000 large frame turbines and essential machines worldwide.

We are a primary data acquisition supplier for turbomachinery OEMs and service groups chosen for our easily integrated, semi-custom, modular hardware and software approaches.

In addition, we are the original developers and designers of all the hardware and software used in the products:

- Hardware (PCB layout, circuit design, part selection)
- Firmware (DSP and FPGA programming)
- Software (Windows application and drivers)

Our modular hardware and software allow the products to be tailored to customer applications.

# modular solutions for your business needs

#### **ROTATING MACHINERY DIAGNOSTICS**

Rotating machinery diagnostic is a specialized troubleshooting method that determines a machine's health by analyzing the rotor dynamics.

Paired with the AS-1250 front end with up to 40 channels, Alta Solutions has its **AS-410 Vibration Analyzer**, which is a powerful rotating machinery analyzer used for transient analysis (startup and shutdown) and advanced troubleshooting (resonance testing, bearing and gearbox, shaft cracks). Unlike other systems that create data islands, the AS-410 imports and integrates plant process data for better and faster analysis.



#### MACHINERY PROTECTION

Machinery protection systems are a fundamental part in protecting your machinery assets. The AS-7000 will quickly detect abnormal machinery conditions and shutdown your machinery to avoid catastrophic failures and further damage. It is API 670 compliant and integrates powerful machine analysis.



## **ALTA SOLUTIONS PROVIDES** A TOTAL SOLUTION



## **APPLICATIONS**

Plant-wide Monitoring

Fleet-wide Monitoring

**Machinery Protection** 

**Machinery Monitoring** 

**Rotating Machinery Diagnostics** 

### MACHINERY MONITORING

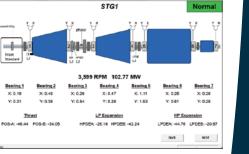
It is important to have a successful machinery monitoring program to ensure that a plant's vital machinery will be available for operation.

The AS-6000 system and AS-250 monitoring software use vibration related sensors (accelerometers, velocity pickups, and displacement probes) and others to characterize the movement and performance of a machine.

Alarm limits are used to assess the machinery health and provide an indication to an operator when a machinery failure may occur.

#### MACHINERY

- Mill
- Roll Grinders
- Motors
- Fans



AS-250

- Gearboxes
  - Motors
  - Cooling Towers
  - Pumps

## DON'T BE STRANDED ON A DATA ISLAND SOFTWARE



AS-410 Vibration Analyzer Software - Merging the best features of a machinery analyzer, a dynamic signal analyzer, a transient capture device, and a digital recorder.

AS-250 SpectralMon<sup>™</sup> Advanced Monitoring Software - The advanced real-time monitoring and analysis with a powerful set of alarming criteria to detect changes in the dynamic signature of your critical machinery or process.

AS-380 AltaView Fleet-wide Monitoring Software - An open architecture web-based turbomachinery condition monitoring system that provides live machine status, dynamic waveforms (time and spectrum) and historical data trending.

HARDWARE



AS-7000 Machinery Protection System - A high performance, efficient and flexible machinery protection system which not only meets, but exceeds API 670 5<sup>th</sup> edition guidelines. Up to 64 channels.

\*Available as all-in-one advanced protection & condition monitoring system with analysis capability

AS-6000 Advanced Machinery Condition Monitoring System - Advanced condition monitoring system that is specifically designed for today's strict NERC/FERC CIP v6 security requirements.

AS-320 Compact Machinery Protection System - All of the capabilities of a full rack-based protection system are available in a modular, cost effective package. Stand-alone system with enclosure and HMI available. Up to 20 channels.

AS-1250FE Portable Dynamic Signal Acquisition Front-End - High performance, compact flexible data acquisition hardware platform that uses Alta Solutions' powerful machinery monitoring and analysis software with up to 40 channels.

AS-3000 Series Smart Proximity System (SPS) - The performance of a fully API 670-compliant eddy-current proximity measurement system with flexibility of digital configurability.



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## Monitor

Analyze

Protect