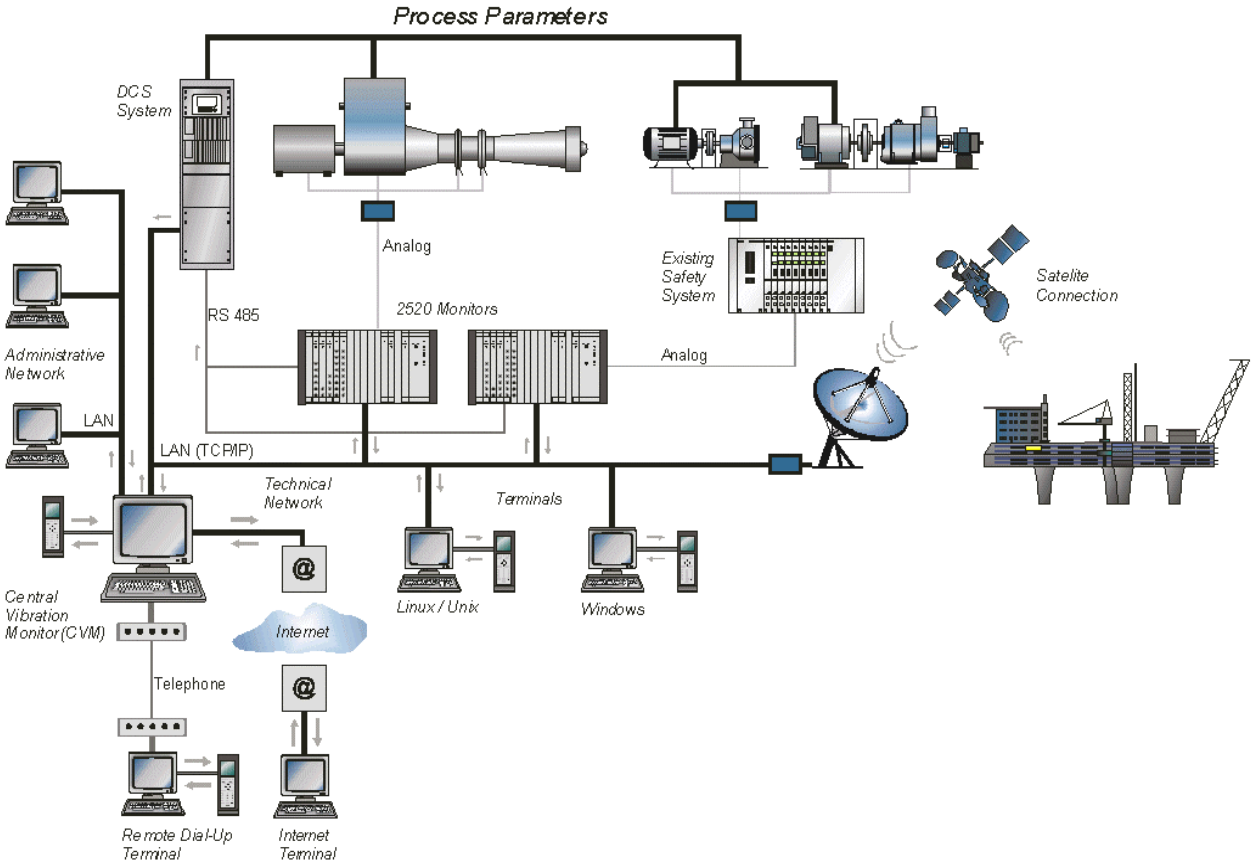
Brüel & Kjær Vibro

APPLICATION NOTE

COMPASS™ & Related Products

COMPASS™ is a fully automatic integrated monitoring system for critical production machinery. Through its modular concept, COMPASS™ can be adapted to a large range of different machines so that all of the requirements of a modern condition based maintenance strategy are fulfilled by one, plant-wide system. COMPASS™ fulfils the following monitoring requirements:

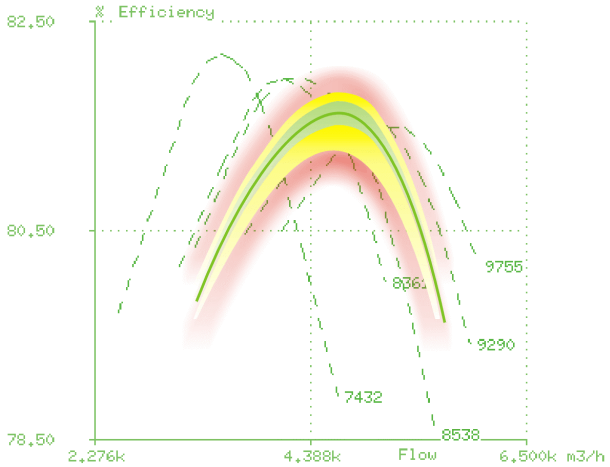
- *Machinery protection to prevent a catastrophic machine failure*
- *Diagnostic monitoring of the condition of the machine for the early, accurate diagnosis and analysis of faults and trending*
- *Performance monitoring of machines for more reliable detection and diagnosis of incipient faults corroborated with other monitoring techniques (vibrations, oil analysis, etc.) as well as for monitoring the machine efficiency for economical operation*
- *Integrating off-line (data collector) and on-line monitoring*



Typical COMPASS plant-wide installation, with integrated vibration and performance monitoring, as well as remote access through modem, satellite or the Intranet.

Performance Monitoring: Condition monitoring applies systematic recording and trending of process and vibration data – to make a history of operation. Performance monitoring uses the raw process data to look behind the actual measurements to:

- Keep track of operational losses to reduce operational cost.
- Increase availability by monitoring degradation of component performance.
- Gain better understanding of the machines behavior.
- Make better maintenance decisions.

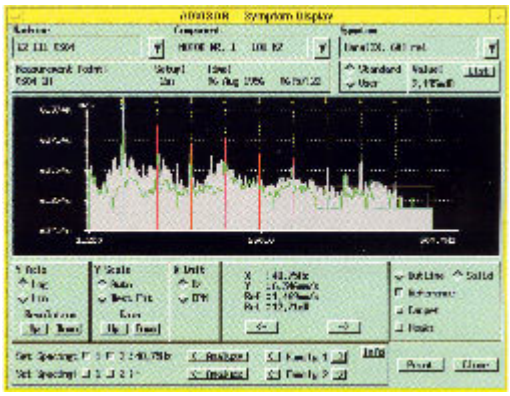


Performance map for a gas turbine, compressor section.

Integration of performance and vibration monitoring makes all relevant information available from the past to the present. It provides selectable overall overviews to satisfy different needs and users.

Advisor diagnostic software: Advisor is a COMPASS database scanning and data reduction software tool. It scans the COMPASS database for changes in order to attend developing faults.

Advisor use and customization
Its simple operation and password protection capabilities make it a tool that can be used by anyone in the organization. It can be used to communicate actions to be performed when faults are diagnosed, while allowing all conclusions to be fully reviewed by the user.



Advisor fault symptom analysis tool

It also allows you to make diagnoses on historical data, and to document specific machine histories. You can easily add your own experience into the system by defining new rules or by editing the supplied rules to meet exactly your requirements. The neural network makes it possible to make rule changes without any software changes.

Advisor is an integrated toolbox helping and advising you to focus on the relevant machine fault and diagnosis.

2526 Data Collector System is a lightweight but rugged data collector, extremely easy to use giving alarm indications already in the field. It may be used with the COMPASS system or the Windows-based monitoring package SENTINEL. Some of the benefits of the Data Collector, type 2526:

- Light weight - 1.2 kg.
- Usable with all readily available sensors.
- IP 54 conformity for industrial applications.
- Illuminated LED display.
- DSP design.
- Intrinsically safe version available (EEx).
- Simple operation using two keys.
- Severity of event display for evaluating machine condition at a glance.
- Options for balancing and in-situ analysis.
- Complete spectrum display with cursors.
- Quick evaluation of machines and alarms:
  - Pre-defined notes may be added.
  - Absolute bearing vibrations.
  - Process parameters (DC signals), rotational speed.
- Modem connection

Brüel & Kjær Vibro A/S
2850 Nærum – Denmark
Tel.: +45 4580 0500
Fax: +45 4580 2937
E-mail: info@bkvibro.com
Internet: www.bkvibro.com

Brüel & Kjær Vibro GmbH
65293 Darmstadt – Germany
Tel.: +49 (0) 6151 428 1100
Fax: +49 (0) 6151 428 1200
E-mail: info@bkvibro.de
Internet: www.bkvibro.com