Managing knowledge to optimize asset efficiency

The SKF @ptitude Decision Support system enhances your team’s ability to keep plant machinery up and running. A systematic, proactive process by automatically identifying probable faults at the earliest signs of undesirable trends, allowing you to take appropriate action, and enabling seamless integration of technology across employees throughout your local or global organization. @ptitude enables your workforce to rapidly determine:

- What is the problem?
- How serious is it?
- What should be done about it – priority?
- How urgent is it?
- What is the problem?
- How serious is it?
- How urgent is it?
- What is the problem?
- How serious is it?
- What should be done about it – priority?
- What is the problem?
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Users benefit from the power of the @ptitude Decision Support solution

- Optimize asset efficiency – Users maintain a continuous awareness of machine health enabling a proactive approach to reliability maintenance.
- Improved time utilization – New employees spend less time analyzing spectrum and correlating data.
- Document management feature reduces time spent accessing related documentation.
- Reduced training time – Capture and retain the knowledge of your most seasoned professionals for use by everyone, reducing the learning curve for new employees.
- Enhanced productivity, quality, worker safety and the environment.
- Reduced downtime.
- Improved operational efficiency.
- Easier fault resolution reduces the likelihood of disasters.

If the @ptitude system enables a proactive approach to reliability by identifying faults and symptoms before they result in failures.

The SKF @ptitude system enables a proactive approach to reliability by identifying faults and symptoms before they result in failures.
The SKF @ptitude Decision Support system

SKF @ptitude Decision Support is an embedded knowledge-based system that automatically analyses asset health data, identifies symptoms and faults, then issues a user of the specific nature of the problem, its severity priority and recommended actions.

SKF @ptitude Decision Support

SKF @ptitude Decision Support provides the fault resolution, generated by AKS, and user interface for notification and integration with your maintenance planning system, ensuring effective machine and process analysis, diagnosis, reporting and corrective actions.

The asset history can then be analysed and the results applied to a Reliability Centered Maintenance Strategy to improve the plant Overall Equipment Effectiveness.

The SKF @ptitude Decision Support system provides two user interfaces:

- A web-enabled browser allows users to access plant fault data via the internet.
- A data provider interface is a data mining engine that extracts data from other data providers and resolves into faults. @ptitude Decision Support to be combined with symptoms from other data providers and resolved into faults. @ptitude Decision Support offers a wide selection of system interfaces:

  - @ptitude Decision Support application interfaces
  - Data provider interfaces
  - SKF @ptitude Maintenance System integration
  - Computerized Maintenance Management Systems (CMMS) interface
  - SKF @ptitude Decision Support to be combined with symptoms from other data providers and resolved into faults. @ptitude Decision Support offers a wide selection of system interfaces

The SKF @ptitude Decision Support system incorporates today’s most advanced technologies to integrate data from multiple sources into an easy-to-use application that enables workers to apply decision-making criteria quickly and uniformly, based on meaningful data and a pre-determined set of priorities and practices.

The SKF @ptitude Decision Support system offers a methodology that embodies a fundamental concept of how knowledge is stored within the SKF @ptitude Decision Support system solution and is the fundamental component of how knowledge is stored within the SKF @ptitude Decision Support. AKS provides process and inspection data, performance parameters, and Key Performance Indicators (KPIs) with greater efficiency and accuracy. It provides a methodology that enables a fundamental understanding of the equipment failure modes, the measurements required to effectively monitor equipment health, and the consequences of failure.

Asset Knowledge Science

Asset Knowledge Science (AKS) is a core component of the SKF @ptitude Decision Support system solution and is the fundamental component of how knowledge is stored within the SKF @ptitude Decision Support. AKS provides process and inspection data, performance parameters, and Key Performance Indicators (KPIs) with greater efficiency and accuracy. It provides a methodology that enables a fundamental understanding of the equipment failure modes, the measurements required to effectively monitor equipment health, and the consequences of failure.

Hardware requirements

**Data provider interfaces**

A data provider interface is a data mining engine that extracts key features from vibration data to condition monitoring systems to identify symptoms. Symptoms are sent to the SKF @ptitude Decision Support for further analysis and resolution into faults. SKF @ptitude Decision Support offers a wide selection of system interfaces:

- **Condition monitoring systems such as SKF @ptitude Monitoring systems**
- **Process control systems using OPC**
- **Data historians**
- **Other plant systems via an open ASCII file interface**
- **User entered data**

SKF @ptitude Decision Support Application Interfaces

**Computerized Maintenance Management Systems (CMMS)**

A Computerized Maintenance Management System interfaces with SKF @ptitude Decision Support to be combined with symptoms from other data providers and resolved into faults. SKF @ptitude Decision Support offers a wide selection of system interfaces:

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Computerized Maintenance Management System Interfaces

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Asset Knowledge Science

Asset Knowledge Science (AKS) is a core component of the SKF @ptitude Decision Support system solution and is the fundamental concept of how knowledge is stored within the @ptitude Decision Support (ADS). ADS combines process and inspection data, performance parameters, and Key Performance Indicators (KPIs). AKS goes beyond traditional models like Failure Modes and Effects Analysis (FMEA), Fault Tree Analysis, Reliability-Centered Maintenance (RCM), and others. It provides a methodology that embeds a fundamental understanding of the equipment failure mode, the process requirements, and the consequences of failure.

The SKF @ptitude Decision Support system

SKF @ptitude Decision Support is an embedded knowledge-based system that automatically analyzes asset health data, identifies symptoms and faults, then routes a user of the specific nature of the problem, its severity priority and recommended actions.

SKF @ptitude Decision Support

SKF @ptitude Decision Support provides the fault resolution, generated by AKS, and user interface for notification and integration with your maintenance planning system, ensuring effective machine and process analysis, diagnosis, reporting and corrective action.

The asset history can then be analyzed and the results applied to a Reliability Centered Maintenance Strategy to improve the plant's Overall Equipment Effectiveness.

The @ptitude Decision Support system provides two user interfaces:

- The SKF @ptitude Decision Support application interfaces
- The SKF @ptitude Decision Support system is a wide selection of system interfaces:

Network configuration – software

- SKF @ptitude Decision Support
- Other Vendors (e.g. Maximo, Engica®)
- Computerized Maintenance Management System (CMMS)
- Condition Monitoring Suite as well as third party systems.

Hardware requirements

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Minimum Requirements</th>
<th>Recommended Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows 2000 with Service Pack 3+</td>
<td></td>
<td></td>
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<tr>
<td>Windows XP Professional with Service Pack 2</td>
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<tr>
<td>OR</td>
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<tr>
<td>Linux REDHAT</td>
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<tr>
<td>OR</td>
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<tr>
<td>OS with 2.1 GHz Pentium IV, 3.0 GHz Core 2 Duo</td>
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<td>OR</td>
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<td>HD with 1024 x 768 1280 x 1024 or larger</td>
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<td>OR</td>
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<tr>
<td>DVD drive</td>
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<td>One (1) required</td>
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<tr>
<td>Storing data</td>
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<tr>
<td>Oracle®/Microsoft SQL Server®</td>
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<td>OR</td>
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<tr>
<td>Version 9i, 10g/SQL Server 2005</td>
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</tbody>
</table>

NOTE 1: Other applications running simultaneously may degrade performance.

NOTE 2: These requirements apply to SKF @ptitude Decision Support complete with database management system. Other applications running concurrently may degrade performance.

NOTE 3: These requirements apply to SKF @ptitude Decision Support complete with database management system. Additional standard disk space is required for data backups and post-processing. These guidelines are for general use only and may not be optimal for any specific application. Placement of raw data and other files on RAID storage is recommended. Please consult the SKF Field Service Engineers for more information on hardware requirements. Please refer to the SKF Field Service Engineer for more information on hardware requirements. Please refer to the SKF Field Service Engineer for more information on hardware requirements. Please refer to the SKF Field Service Engineer for more information on hardware requirements.
The SKF @ptitude Decision Support system

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Data provider interfaces

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- Condition monitoring systems such as SKF @ptitude Monitoring Facilities or user private systems.
- Process control systems using OPC.
- Data historians.
- Other plant systems via an open ASCII like interface.
- User entered data.

The @ptitude Decision Support system incorporates today's most advanced technologies to integrate data from multiple sources into a user-friendly application that enables engineers to apply decision-making criteria quickly and efficiently, based on meaningful data and pre-determined sets of priorities and practices.

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<tr>
<td>Hard drives</td>
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</tr>
<tr>
<td>Disk space available</td>
<td>1.2 GB 1.2 GB or more</td>
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<tr>
<td>Disk space occupied</td>
<td>0 GB 0 GB or more</td>
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NOTE: These requirements apply to SKF @ptitude Decision Support complete with database management system. Other applications, including visualization may depend on additional requirements.

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Ordering information

Supported @ptitude Decision Support Kits
- @ptitude Decision Support system kit for @ptitude Analyst
- @ptitude Decision Support application kit for @ptitude Observer
- @ptitude Decision Support application kit for Vibro-Viewer
- @ptitude Decision Support application interface for OPC Client Connect

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Managing knowledge to optimize asset efficiency

The SKF @ptitude Decision Support system enhances your team’s ability to keep plant maintenance in check. A systematic approach to reliability management is the process by automatically identifying probable faults at the earliest stage of events, then prescribing appropriate action, and enabling a consistent methodology among employees throughout your local or global organization.

@ptitude enables your workforce to rapidly determine:
- What is the problem?
- How serious is it?
- What should be done about it – priority?
- What are the potential risks to productivity, quality, worker safety and the environment?

Users benefit from the power of the @ptitude Decision Support solution
- Optimize asset efficiency
- Users maintain a continuous awareness of machine health enabling a proactive approach to reliability maintenance.
- Improved time utilization
- Internal maintenance facilities spend less time analyzing spectrum and correlating data.
- Document management feature reduces time spent accessing related documentation.
- Reduced training time
- Capture and retain the knowledge of your most experienced professionals for use by everyone, reducing the learning curve for new employees.
- Earlier fault resolution reduces the likelihood of downtime.
- The @ptitude system enables a proactive approach to reliability by identifying faults and symptoms before they result in failures.
- Decreased maintenance costs
- Facilitate consistent, effective and efficient decision-making system for improved business results.
- Improved operational efficiency
- Data to information to action
- Provides a powerful structure to capture, retain and utilize knowledge
- Enhance the knowledge of your team overall.

A range of Product Support Plans are available to protect your investment. Contact your local SKF Reliability Systems Sales Representative for additional information.

Installation and training

Installation and training is available through your local SKF Representative for additional information.

For additional information on SKF Reliability Systems products, contact

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5275 Glendora Lane • Canoga Park, California 91304 USA
Telephone: +1 800-236-6649 • Fax: +1 800-560-5526
Web Site: www.safecan.com

@ptitude Decision Support application interfaces for data providers
- @ptitude Decision Support application interface for FRMS®
- @ptitude Decision Support application interface for Vibro-Viewer
- @ptitude Decision Support application interface for ENTEK
- @ptitude Decision Support application interface for OPC Client Connect

@ptitude Decision Support application interfaces for CMMS
- @ptitude Decision Support for MAXIMO®, version 5.2 P03 [CMSW 7469]
- @ptitude Decision Support for ENGICA, version 4.7 or higher [CMSW 7468]
- @ptitude Decision Support for APIPRO, version 4.3 Progress 9.1D [CMSW 7471]
- @ptitude Decision Support for ENTEK, version 5.2 P03 [CMSW 7467]
- @ptitude Decision Support application interface for Vibro-Viewer: version 7.0 or higher [CMSW 7463]
- @ptitude Decision Support application interface for OPC Client Connect, version 2.0 or 3.0 [CMSW 7464]
- @ptitude Observer, version 7.0 or higher [CMSW 7461]
- @ptitude Observer [CMSW 7460-X-EN]
- @ptitude Decision Support for MAXIMO®, version 5.2 P03 [CMSW 7469]
- @ptitude Decision Support for APIPRO, version 4.3 Progress 9.1D [CMSW 7471]
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- @ptitude Observer [CMSW 7460-X-EN]

Installation and training
Installation and training is available through your local SKF Supplier or Representative.
Ordering information

Suggested SKF @ptitude Decision Support kits
- @ptitude Decision Support system kit for @ptitude Analyst [CMSW 7460-X-EN]
- @ptitude Decision Support system kit for @ptitude Observer [CMSW 7461-X-EN]
- @ptitude Decision Support kits for @ptitude Analyst
- SKF @ptitude Decision Support
- @ptitude Decision Support add-ons
- @ptitude Decision Support application add-ons

Product Support Plans (PSP)
A range of Product Support Plans are available to protect your investment. Contact your local SKF Reliability Systems Sales Representative for additional information.

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Managing knowledge to optimize asset efficiency

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For additional information on SKF Reliability Systems products, contact

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