# Industry: Pulp and Paper Plant Machine Type: Kraft Paper Machine

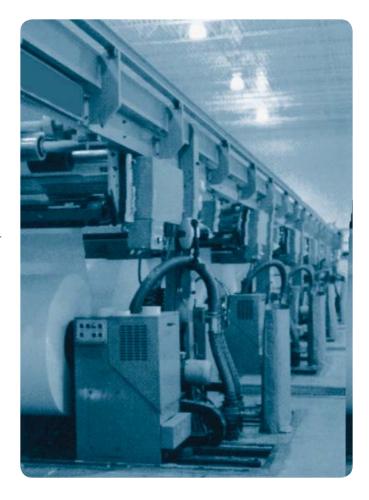
## History

The plant uses SKF portable monitors and PRISM software. There are contracts with the local SKF Service Center to provide vibration monitoring data collection, diagnostic and consulting services. The plant had an existing oil analysis program provided by their local oil supplier at nominal cost, was satisfied and saw no reason to change. They agreed to listen to the SKF Lubricant program description as a courtesy.

### Lubricant laboratory analysis

SKF representatives reviewed the existing program with the maintenance supervisor and determined:

- About 50 to 100 sample points
- Sample frequency irregular, sample intervals often missed, units often overlooked
- Same analysis package for all lubricants and equipment gears, rollers, pumps, hydraulics, turbines, etc.
- Critical report results usually telephoned to plant, without corresponding data
- Reports take about two to four weeks to be returned
- Reports difficult to interpret
- Reports stack up unread
- Usually little or no follow-up on problems detected
- No organized trending of oil data
- No correlation with vibration or other condition monitoring programs
- Invoicing is usually confused, often incorrect





#### **Evaluation**

The maintenance supervisor agreed that it was not a very effective program once reviewed, but it was inexpensive. His biggest problem was the administrative details of running a condition monitoring program and making productive use of the results.

#### Solution

The SKF Representative asked if it would make sense to the maintenance supervisor if his laboratory was able to provide:

- Analysis packages specifically designed for each type of equipment
- · Designed specifically to monitor lubricant condition for contamination, wear rates and oil quality
- Sample schedules for each piece of equipment based on need, history and criticality to operations
- Just-in-time sample supplies (equipment checklist, bottles, labels and prepaid return mailers) delivered to the oilers about three days before samples were due to be taken (oilers use checklist to collect samples, send off in prepaid mailers and submit completed checklist to supervisor)
- Wake up call to oiler (or supervisor) in 10 days if any samples are missing
- Laboratory results one day after receipt of samples
- Reports easy to read:
  - Color coded:
    - · RED (critical immediate action required)
    - YELLOW (abnormal investigate)
    - · BLUE (normal no immediate action required)
  - Written recommendations, with abnormal data highlighted
  - Reference oil data, minimum and maximum acceptance values
  - Reports available by hard copy, by fax, by BBS (critical results always telephoned) direct modem import to PRISM software
  - Multiple copy reports to designated personnel at various management and operations level, as prescribed by customer: maintenance supervisor, oilers, foremen, engineering, operations, etc.
  - Data integrated into PRISM database to trend with vibration data for comparative operational evaluation
  - "Exception" Summary reports each month identifying problems, trends, trouble spots, recurring issues
- Fixed prices (annual contract, with standard monthly charges), simple invoicing process, reconciled quarterly or annually, depending upon client's business methodology

#### **Impact**

The SKF program relieves the maintenance manager most of the administrative work, permitting time to focus on successful detection, diagnosis and correction of machinery problems in the plant. The maintenance supervisor agreed that it makes sense, and agreed to switch to the SKF Lubricant Monitoring Program, replacing the lower cost, vendor supplied program.

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