World Class Performance Achieved with Maintenance Management System

"One of the goals of every maintenance organization is to reduce maintenance costs. To do that, there must be a way to measure them and that is exactly what CHAMPS has done for us."

Brian Delvecchio, Information Systems Superintendent, St. Marys Paper Ltd.

St. Marys Paper Ltd., located along the banks of the St. Mary's River, at the hub of the Great Lakes, produces over 200,000 tons of supercalendered paper per year. The product, a high grade, uncoated paper is most commonly used in advertising inserts, catalogues and magazines.

Construction of the original mill, driven by an American entrepreneur, Francis H. Clergue, was completed in 1896. The facility began as the Sault Ste. Marie Pulp and Sulphite Company, the first mill in North America to produce dried pulp. Later, it was privately owned, partially by the employees, making it somewhat unique in the paper industry in that every employee had a personal stake in the success of the company. Workers pride themselves in their commitment to quality and service and their efforts have paid off with receipt of several supplier awards from major corporations.

Maintaining the assets

As competitive pressures increased and technology continued to advance, St. Marys found themselves behind the technology curve. The company had no automated methods to maintain their critical production assets which totaled over $500 million.

Up until 1989, the approach to maintenance at St. Marys was completely manual. High value equipment assets such as grinders, slashers, debarkers, paper machines, screens, refiners, and supercalenders required the highest level efficiency output and uptime. St. Marys recognized that a Computerized Maintenance Management System (CMMS) was necessary for planned maintenance and reduction of downtime.

With the goal in mind of finding a CMMS to help reduce costs and improve efficiencies, St. Marys began their search. Initially, the search for a system required interfacing with the company's financials system which at that time was VAX-based. Of the vendors evaluated, CHAMPS was determined to be the best fit. After a successful implementation, St. Marys had a system in place to help reduce downtime and standardize maintenance processes.

As technology continued to change, St. Marys was faced with further challenges

Solution Overview

St Marys Paper Ltd

Located along the banks of the St. Mary's River, at the hub of the Great Lakes, St. Marys Paper produces over 200,000 tons of supercalendered paper per year used primarily in advertising inserts, catalogues and magazines

Industry

Pulp and Paper

Challenges

Lack of automated system to manage critical production assets and no application to interface with existing financial system

Solution

Upgraded to CHAMPS CMMS/EAM for systematic work processes, and management of stores, purchasing and accounts payable along with financial application interface

Client Value

- Downtime reductions helped paper machines achieve world class performance
- Elimination of storeroom waste and spare parts cost reductions
- Improved safety record by 20% year over year through better work processes and overall maintenance management

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as the popularity of client/server (C/S) applications began to emerge onto the market. Greater system flexibility with enhanced graphical user interfaces were a strong draw for these systems. Having updated their financial system to C/S, it was time for St. Marys to do the same for their maintenance department.

In 1998, St. Marys decided to investigate potential vendors for the maintenance system upgrade initiative. After a review of several vendors, the mill once again turned to CHAMPS.

"We felt they brought a lot to the table including a solid reputation, extensive experience and an attractive data migration plan that fit our needs," stated Brian Delvecchio, Information Systems Superintendent for St. Marys Paper. "The ability to access the system remotely was another factor in our decision process. And, we already knew the company and support staff on a first name basis so familiarity certainly influenced our decision."

Another factor influencing the decision was the maintenance system's ability to interface with St. Mary's financials application, EmpowerFinancials. To address this situation, a cost-effective interface was mapped out between the maintenance and the financial systems to the mill's satisfaction.

Prior to implementation of the upgraded version of the maintenance system, St. Marys dedicated a core group to develop mill-specific user manuals and procedures based on job functions. The core group delivered the training to all users just prior to implementation. This same approach has been used to address training needs of new hires and for those personnel requiring refresher courses.

The remote access capability of the maintenance system has been a tremendous benefit for planners and supervisors. These users are able to connect from anywhere over the Internet and run the application from their virtual desktop provided by a Citrix Metaframe server. Having this connectivity enables them to prepare for the upcoming day by planning and scheduling their work orders from home on the previous evening if they choose. This remote connectivity also enables St. Marys to efficiently address support issues. Rather than going through the attempts of describing a particular issue, St. Marys is able to access the maintenance system support desk which is immediately able to shadow the administrator to quickly resolve issues. This enables both St. Marys and the maintenance system vendor to view the same user session and know exactly what needs to be done.

Systematic work process approach

From a maintenance perspective, CHAMPS has helped St. Marys become more systematic in the way they approach work. Rather than 'shooting from the hip', the system helps personnel to think through a solution. As a result, workers have come to understand the importance and the reasoning for improved spare parts control, maintenance cost control, and work order planning.

For users, the maintenance system has become a daily tool for improving work processes. It is the primary application used by the purchasing, stores and accounts payable departments. All workers at the mill use it as their spare parts inventory catalogue. Managers and superintendents use it to view up to the minute committed maintenance costs, approve (or deny) purchase requisitions and review work orders (particularly safety related work orders). Production supervisors enter and review work orders during the course of their shift and safety stewards use it to enter work orders related to issues they may discover during their safety audits.

Emphasis on predictive and preventive maintenance has played a critical role in improving maintenance efficiency. The CMMS is integral to these improvements in that its preventive maintenance module automatically generates work orders on time-based intervals. These work orders have associated with them user pre-configured attachments such as checklists and CAD drawings which print along with the work order step.

Repair day planning and execution is another critical function of the maintenance department. The PM module is used extensively in this respect for generating work orders associated with these repair days. Prior to scheduled repair days, all work orders—whether auto-generated or manually entered and tagged as requiring machine downtime—

are extracted from the CMMS into Microsoft Project where they can be further prioritized and reviewed for potential resource conflicts. Repair day schedule compliance has improved markedly since this structured approach was implemented.

For materials management, the maintenance application has given St. Marys the opportunity to close their stores which allowed for much tighter control of inventoried items. Spare parts costs have also been addressed through reports that analyze patterns of stores issues, identifying possible waste, and allocated costs to the appropriate departments. Stores issues are incorporated into St. Mary's primary maintenance costs reports which are available online and deliver the status of maintenance costs versus budget on an up-to-the-minute basis for management review.

Additionally, stores issues reports have been created on all parts that have not been issued in the last five years. The resulting report is broken down by department and forwarded to the appropriate department planners. The planners have used this as a tool to remove unnecessary parts from stores.

Addressing critical safety issues

St. Marys remains pleased with the maintenance system's continued support and the results that they have experienced. Senior management has certainly embraced the system as the Mill Manager reviews all purchase requisitions on a daily basis to keep abreast of not only financial aspects of his operation, but also safety.

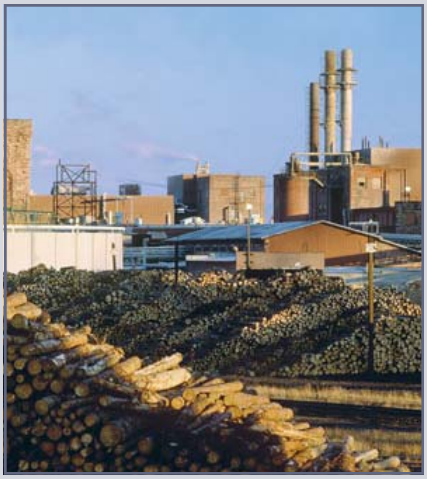
"We have improved our safety record by 20% year over year. A lot of that can be attributed to the maintenance system." Delvecchio says.

By means of a safety work order, they are able to discern which work is a priority and react accordingly. Without the organization the maintenance system provides, the slower reaction time to such critical issues could prove costly or even disastrous.

Achieving world class performance

Not only has the maintenance system provided a means for addressing important safety issues, but the system has helped St. Marys progress toward world class maintenance standards. At the heart of St. Marys production are three major, critical production assets in the form of paper machines. For these machines, a percentage of maintenance downtime is budgeted against the machine availability. World class standards indicate that these type machines should have about 2.5% and 4.5% budgeted downtime according to equipment type. With the disciplined maintenance process provided by CHAMPS, each machine performed ahead of world class standards by better than one percentage point of actual downtime.

Before CHAMPS was in place, downtime always exceeded the budgeted allocation in time and cost. Not only did it take longer to complete planned work, but equipment broke down more frequently from lack of preventive maintenance. CHAMPS became a welcome tool for change and helped set new standards in operational efficiencies. ■



In 2012, St. Marys Paper Ltd. ceased operations due to complicated financial obligations. The site is currently being redeveloped into an advanced bioenergy and smart energy park allowing for research and pilot plants related to biofuels, district heating, and alternative energy technology.

About CHAMPS

For more than four decades, CHAMPS Software, Inc. has been developing and delivering Computerized Maintenance Management System (CMMS) and Enterprise Asset Management (EAM) software solutions that enable enterprises to optimize the life cycles of their capital assets. CHAMPS CMMS/EAM continuously improves operations by incorporating industry best practices with the flexibility inherent in component based web architected solutions.

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