



THE COMPUTERWORLD HONORS PROGRAM

CASE STUDY

LOCATION:
Racine, WI, US

YEAR:
2006

STATUS:
Laureate

CATEGORY:
Manufacturing

NOMINATING COMPANY:
EMC

ORGANIZATION:

Modine Manufacturing

PROJECT NAME:

Digital Image Library

Summary

Modine Manufacturing, a global provider of thermal management systems, has standardized on the EMC Documentum solution worldwide to increase the efficiency and process of accessing and managing its global business content. This enterprise content management solution has reduced staff time devoted to finding and managing corporate documents by hundreds of hours over a year, improved customer support response times, helped engineers be more effective and streamlined payables processing—all while mitigating the risk of losing critical business content.

Introductory Overview

Modine Manufacturing is a \$1.6 (US) billion-dollar global leader in thermal management systems and components. The company's products are used in light, medium and heavy-duty vehicles, HVAC (heating, ventilating and air-conditioning) equipment, industrial equipment, refrigeration systems, fuel cells and electronics. Modine has more than 8,200 employees, 35 facilities in 15 countries worldwide.

Modine relies on a SAP R/3 Enterprise Resource Planning (ERP) system to manage much of its structured content, such as financial transaction data. Yet for its broad array of crucial unstructured content—contracts, marketing materials, laboratory work orders, financial reports, purchase orders, invoices and photos, it previously depended on a primarily manual process. Over the years, storing the unstructured content became unmanageable as several versions of files were stored in a multitude of formats (paper, TIFF, JPEG) and in multiple locations. In addition, the paper-based information -- including thousands of boxes of files that were stored at the company's headquarters -- was not backed up.

This manual system was not only costing the company valuable time and money to locate and retrieve files, but exposed it to risk because there was no disaster recovery in place for its paper content. In the event of a physical disaster such as a flood or fire, all paper files would be lost. With these issues in mind, Modine set out to find a solution to help capture its paper files in an electronic format and improve the overall management of the company's digital assets and



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internal documentation.

After researching the alternatives, Modine decided to standardize on EMC Documentum to provide a centralized electronic storage repository for all of the company's content. Now, paper files are scanned into a central and secure Documentum repository, which also holds the rest of Modine's electronic files. EMC Documentum allows Modine employees to manage unstructured data across the company through a common user Web interface. Anyone who needs to have access to a file, and the appropriate security authorization, can retrieve that information any time, day or night, and from any locations worldwide.

Later, the company needed to provide instantaneous, centralized access to Sarbanes-Oxley and other internal controls documents generated by its worldwide facilities. There are many documents involved in keeping Modine manufacturing plants compliant with industry and government regulations. Narratives (documents describing the control points of a process), flow charts, risk control matrices, audit test plans and results, and other internal controls documents all need to be kept up to date. Each of Modine's 18 manufacturing plants in North America and 17 plants in Europe and Asia has its own version of these documents because requirements and procedures vary across locations.

The benefits have included hundreds of hours of annual staff time saved in the retrieving and managing corporate documents. In addition, faster and more secure access to corporate content has made regulatory compliance more efficient and effective, reduced overall business risk, improved customer support responsiveness, and streamlined other key operations, such as engineering and finance.

As of late 2005, more than 600 employees worldwide—a number expected to triple in 2006—were using EMC Documentum to manage more than 61 gigabytes of content in many business areas, including compliance, corporate communications, customer support, legal, and research and development.

Benefits

By standardizing on an enterprise content management system, Modine has saved money and time and improved its business-critical processes. The company has especially benefited from the roll out of two applications it has implemented on the Documentum solution—the Digital Image Library and Internal Controls Library.

The Digital Image Library allows Modine employees from around the world to access thousands of indexed Modine photos, logos and other digital images. By creating a Digital Image Library, Modine has reduced the valuable staff time devoted to locating and reformatting digital images by 65 percent—equivalent to more than 600 hours annually.

In the past, when employees needed a photograph of a product or plant operation to include in a presentation or on a Web page, they would email or call Modine's corporate communications department. A corporate communications staff person would then search through multiple copies of more than 1,000 digital images stored on CDs, hard drives and the company's local area network (LAN) to find the right image and its most current version.

Since Modine saves all photos as printing press-ready TIFF files with 3,000 dpi resolution, the staff person often needed to use Adobe Photoshop to create a copy of the file, and save the copy



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at a much lower resolution JPEG file. The Corporate Communications department spent more than 20 hours each week finding the right images and delivering them in the right format.

Today, users throughout the company can quickly and easily locate and view thumbnail versions of images, identify the most recent version of an image and automatically render images as low-resolution JPEG files or other resolutions and formats as needed. As a result, the number of digital image requests received by Corporate Communications has been cut by two-thirds. Corporate Communications now spends an average of seven hours each week fulfilling internal requests for images, compared with the 20 hours it used to take. The Digital Image Library allows Corporate Communications to be more productive, provides employees with universal and simplified access to digital images, and ensures that the digital images being retrieved are accurate and up-to-date.

The second application that has provided operational savings and productivity improvements to Modine is the Internal Controls Library. Previously, the company's audit department kept copies of all internal government compliance/audit controls documents in a Lotus Notes database that was updated annually during the audit process by emailing copies to all plant locations. Previously, a hosted Web site provided global access to the audit team but performance was slow and system crashes were frequent. In addition, access to Microsoft Visio flow charts was limited to those with the Visio application on their desktop PCs.

With the Internal Controls Library, all internal controls documentation, including Sarbanes-Oxley information, is now stored in a Documentum repository at the company headquarters in Racine, Wis. Using EMC Documentum's Web client interface, employees at all Modine plants worldwide can quickly and easily access the most recent version of these documents.

Modine has especially valued the EMC Documentum's out-of-the-box web client support of seven languages. As a result, Modine was able to expand its user base from 30 employees in the U.S. to 500 around the world, providing them with immediate access to controls documents through a browser client in their native language.

During the company's major annual audit by external auditors, Modine estimates that the Internal Controls Library saved internal auditors more than 50 hours of rework tied to miscommunications due to incorrect versions being reviewed. Previously, when revisions were made to controls documents, Modine auditors had to email an updated copy or express mail a CD to external auditors. At times, external auditors often working in separate locations may have been working off of different versions of the same document. This ultimately created confusion and wasted time. With Documentum, employees and external auditors access the same information in its most current format.

The Importance of Technology

EMC Documentum allows Modine to easily and efficiently capture and centrally manage corporate content across the company. With this technology, anyone who needs to access corporate information can do so at any time, day or night, and from any location worldwide. In addition, Modine's manual largely paper-based environment is being replaced with an electronic one that better protects the company's assets in the event of a disaster.

The Web-based functionality of Documentum was especially important to Modine since content is accessed by 35 facilities in 15 countries. Through Documentum Webtop, a configurable



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Web interface, Modine employees access the EMC Documentum repository and content management services using a standard browser application. Another feature important to Modine as a global company is that the Documentum Webtop supports seven of the eight languages that its employees speak.

The Documentum Digital Image Library allows Modine to manage all its content through one Web-based interface in a quick and efficient manner. The key features of the Digital Image Library that Modine is using include:

- Content management – This includes content management services such as check out/versioning, lifecycle, search and rendition through the browser interface.
- Thumbnail viewing – Modine employees can view the contents of any folder or the results of any search via auto-generated thumbnails, dramatically speeding time to search and find.
- PowerPoint assembly – Modine employees search and review entire PowerPoint presentations or individual slides without having to download and open them at their desktops.
- File transformation – This feature converts files automatically to a format chosen by the user. For instance, Documentum's Media Transformation Service can convert high resolution print images to low-resolution Web- and PowerPoint ready JPEGs.

The Internal Controls Library, another Documentum implementation, provides an automated and integrated online environment for creating, reviewing, revising, approving, distributing and auditing controlled content. Functionality provided by this application to Modine includes:

- Secure, globally accessible repository: Modine employees and auditors retrieve safeguarded documents from a centralized, secure environment for review and approval.
- Content management – This includes content management services such as check out/versioning, lifecycle and searches through the browser interface.

Originality

By standardizing on a single enterprise content management solution, Modine believes it has a strong competitive advantage when both complying with governmental regulations and improving knowledge management across its global operations. Modine is using Documentum to manage many aspects of its unstructured information including compliance documents, images, rich media and office documents – in a standard environment. It is becoming the central and comprehensive repository for all the company's unstructured content, and as each new implementation extends the use of the repository, the value increases because training and development are both reduced as the users become more acclimated to a common system.

Success

Modine's new enterprise content management system has exceeded the company's expectations. This project has greatly mitigated the risk associated with the company's previously unmanaged unstructured content and has brought immense efficiencies to its internal controls process and digital assets. In addition, Modine is continually finding new ways to use its new solution.

For example, Modine has deployed EMC Documentum for its new Laboratory Work Order



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system. This implementation manages 26 gigabytes of data and reports results (over 6,000 tests per year) from wind tunnel, heat, chemical, vibration and other tests of Modine's thermal management systems and components. Engineers now search a Microsoft Access database to find historical tests, which then links them to the Documentum repository to view electronic PDF versions of the laboratory work orders, raw data and resulting. Having a central, easily searchable location for all the raw data associated with the reports also makes it easier for engineers to analyze test data.

In Modine's Legal department, filing cabinets and paper have been replaced with Documentum to manage the hundreds of contracts and other legal documents, such as SEC filings and case files. Modine central heating, ventilation, air conditioning and refrigeration (CHVAC&R) customer service representatives and application engineers also use the Documentum system to access over 3 years of sales order information (more than 500,000 documents including the faxed orders, order confirmations and invoices) to respond quickly to customer inquiries. Because of the success of these Documentum applications, the demand for new applications and uses continues to grow.

According to Carlton "Butch" Harper, Chief Information Officer, "Our internal customers are lined up, wanting EMC Documentum deployed in their departments. They've seen results elsewhere in the company so I don't have to sit here and convince them why they need it. I see a tremendous future in continuing to extend EMC Documentum across our growing global enterprise."

For instance, Modine's accounts payable department is piloting Documentum to streamline the processing of invoices, purchase orders and receipts from the company's SAP R/3 system, and the capturing data from scanned invoices. Modine is also planning to integrate other modules of its SAP system with Documentum system by using EMC Documentum Content Services for SAP.

Difficulty

The most demanding aspect of rolling out the Internal Controls Library application was the intense collaboration by employees from 15 countries across multiple time zones. People on the worldwide team needed to be flexible and willing to get up early or stay up late to participate in the many phone conference calls and pilot testing that were required to complete the project.

The upfront process of organizing the company's unmanaged and unstructured data was the biggest challenge of the Digital Image Library project. This meant that employees needed to review thousands of print photos stored in filing cabinets along with electronic files stored on CDs and other formats. First, they needed to identify the best and most current versions and then determine how to best organize and categorize the files to make them the most searchable. Then the images needed to be imported into Documentum and indexed. Modine currently has over 1,200 images catalogued and imported.