WITTUR
Industrial Equipment case study

WITTUR

Challenge:

Following a series of acquisitions, Wittur, a leading manufacturer of elevator components, modules and systems, needed to leverage the massive amount of diverse data across its globally-located plants and to increase part reuse.

Solution:

The company adopted Dassault Systèmes' EXALEAD OnePart search application to provide its sites with access to a consolidated source of standardized information to meet their needs.

Benefits:

Wittur is able to search through its various data sources - SOLIDWORKS PDM Professional for geometry as well as other legacy SQL databases - reducing the time engineers spend looking for information by more than 20 hours per day, which represents over €180,000 per year. EXALEAD also helps them find existing parts for reuse in new projects, which avoids unnecessarily creating new ones.

SAFETY IN MOTION

Many of us think of safety when we enter an elevator. Doors failing to open, sudden stops, abrupt landings...these are just some of the problems no one wants to experience. However, other considerations also enter into play such as a smooth ride - as opposed to a lurching effect -, or having the elevator and building floors aligned when the elevator opens its doors so that people do not trip when getting out. Elevators are actually complex machines with sensors and electronic equipment that help make the ride not only safe but pleasant as well.

"At Wittur we manufacture a wide range of elevator components from sophisticated mechatronic mechanisms for the cabin and landing doors to other components that include gearless drives, slings, safety gears, cars and braking systems," Marcus Aichinger, Corporate R&D Manager – Processes and Tools, at Wittur said. "We focus on comfort and safety when designing our products. The company started out in 1968 as a manufacturer and distributor of elevator swing doors and experienced steady growth since then, both organically and through acquisitions," he explained. "Our customers are global elevator installers that include Kone, Otis, Schindler, Hitachi, and ThyssenKrupp Elevator as well as smaller independent installers operating on a more local scale."

One of Wittur's strengths is its ability to accurately analyze market trends, which enables it to anticipate its customers' needs for innovative products. "One of these innovations is an electronic overspeed governor used to measure the speed of an elevator and its acceleration," Aichinger said. "If an elevator is going too fast, it detects its speed and activates the brake. An electronic overspeed governor is more secure because it is much more sensitive than a mechanical one."

DIVERSE INFORMATION SOURCES THAT COMPLICATE THE SEARCH

As it acquired companies and established production plants and sales organizations around the world, Wittur found itself faced with a diverse IT environment that prevented its employees from easily finding and leveraging all of its information. Data was stored in different legacy SQL databases each with their own material codes, norms and structure, which had to be sifted through individually. "This was extremely time-consuming," Aichinger said. "We needed a solution that would search and organize the information for us. We needed more clarity."

20 hours and €184,000

EXALEAD has reduced the overall time engineers spend searching for information by more than 20 hours per day, which represents an annual savings of €184,000.

Another challenge was to reduce the number of duplicate parts in its system. "Our engineers were having difficulty finding existing parts for new projects, so they preferred redesigning them, even though, in many cases, a similar part existed," Aichinger said. "This continuous duplication of parts required additional storage space. It also drove up our costs as redesigning a part includes R&D, manufacturing, testing, logistics and inventory, all activities that could be avoided if we could just find an existing part to fit the bill. Redesigning parts also takes time, time we would rather spend on what our customers value the most: innovation and fast delivery to market."

According to Aichinger, another major project setback is working with obsolete data. "This is what happens when the right information is not centrally available," he said. "We, therefore, needed one system that links to all our databases and that everyone can access during an information search," he added. "This system should help us find existing parts for reuse in new projects and provide our global users with a single point of entry to find up-to-date production drawing information as well."

"Our users need to obtain the right drawing information as quickly as possible. EXALEAD is fast and its search results are pertinent and very precise."

— Marcus Aichinger, Corporate R&D Manager – Processes and Tools, Wittur

2D AND 3D SEARCH SOLUTION

To meet its challenges, Wittur chose the EXALEAD OnePart application as its global search solution. "We initially invested in 15 seats of OnePart for our 3D geometry searches and more recently deployed EXALEAD for our 2D drawing and metadata searches," Aichinger said. "For 3D search, one of OnePart's advantages is its shape search feature, which locates part similarities and displays the closest parts in the search results."

"For 2D drawings, we created our Drawing Information System (DIS), which is powered by EXALEAD," Aichinger said. "We are not only able to find the 2D drawings themselves, but all the metadata - part tolerances, material information, and where drawings are used - associated to each drawing. We can also display a component's design history and show the latest revisions," he continued. "Before we had EXALEAD, our engineers would have to search for this information in different sources. Now it's EXALEAD that does this for them. The overall time spent searching for information such as a drawing report, a single part drawing or an assembly drawing has been reduced by more than 20 hours per day, which represents a savings of €184,000 per year."

GEOGRAPHY-SPECIFIC SEARCH RESULTS

Moreover, with respect to the search results, every country does not need the same information. It has to be geography-specific meaning that the results have to be pertinent to the country doing the search. "Materials available on the Austrian market are not necessarily available on the Chinese market," Aichinger said. "Therefore, it isn't necessary for our Chinese colleagues to have these materials show up in their search results. EXALEAD is able to drill down to this level of detail."

Wittur also needed to increase part reuse and reduce the number of redundant parts in its system. "Our PDM system would only display a part if the person doing the search had permission to access it," Aichinger said. "As a result, they would never be able to search the entire database to find out if a similar part existed. With OnePart, even though they are not authorized to download a particular part, they can still preview its thumbnail image, which at least confirms its existence. This alone will enable them to reuse parts instead of recreating them. Once they find a part and need to download its model, if they are not initially authorized to do so, they can request permission from their management."

Wittur takes advantage of EXALEAD's many search possibilities by using its full-text search features, parent-child relationships, attributes-based data such as drawing codes, and filtering possibilities to narrow down the search. "This helps accelerate the process of finding the right information," Aichinger said. "In effect, the engineering department must deliver drawing information such as tolerances, material information, and drawing status to their colleagues on the shop floor. "We are currently transferring all our 2D drawing information into our SOLIDWORKS PDM Professional system and when we are done, the shop floor will be able to search for this information directly. This is already happening in our offices in India and will soon be possible at our other production sites," he said. "Once all our drawing information, including our legacy information from our previous CAD
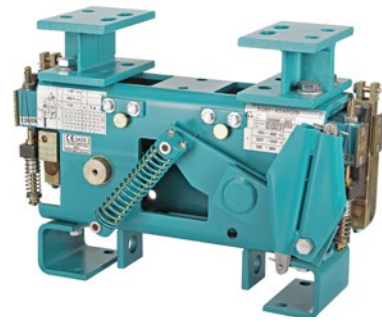
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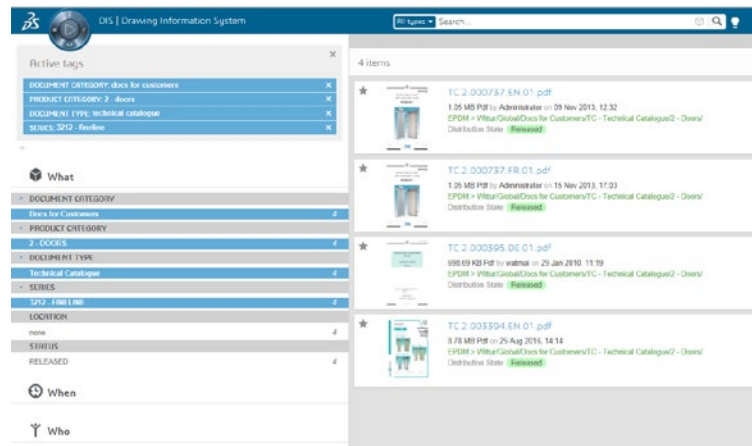
OnePart user interface for Wittur

Focus on Wittur
Leading global supplier of components, modules and systems for the elevator industry

Products: cars, car doors, overspeed governors, car slings, safety devices, hydraulic drives, shaft accessories

Employees: 3,474 worldwide

Headquarters: Wiedenzhausen, Germany

For more information
www.wittur.com

solution, is indexed in EXALEAD, we expect to accelerate our engineering to production process on a worldwide basis."

IT EXPERTISE: AN ESSENTIAL ELEMENT OF SUCCESS

A Dassault Systèmes business partner helped Wittur implement and tailor OnePart to its needs. This included indexing BOM information in EXALEAD as metadata. "By removing BOM information from the drawing, we leave more space for the drawing itself," Aichinger said. "Indexing this information will also enable EXALEAD to search through this data as well to find the related drawings," he added. The partner also developed a function that can print a report as a pdf document. "We can create three customized reports: a supplier report, a sales report, and a full report that can be sent to our suppliers, our sales force and our management team, respectively," he said. "The people who implemented our system understood and sized our IT requirements perfectly because they are IT experts," Aichinger said. "Security issues, database concepts, server requirements, all these points were addressed, resulting in a perfectly configured environment with great performance and speed." Were there any major hardware investments? "Our installation is pretty straightforward," Aichinger added. "We only have one virtual server doing all the indexing and one database server. Most of our data is in our SOLIDWORKS PDM Professional system but EXALEAD also crawls information from our legacy material database."
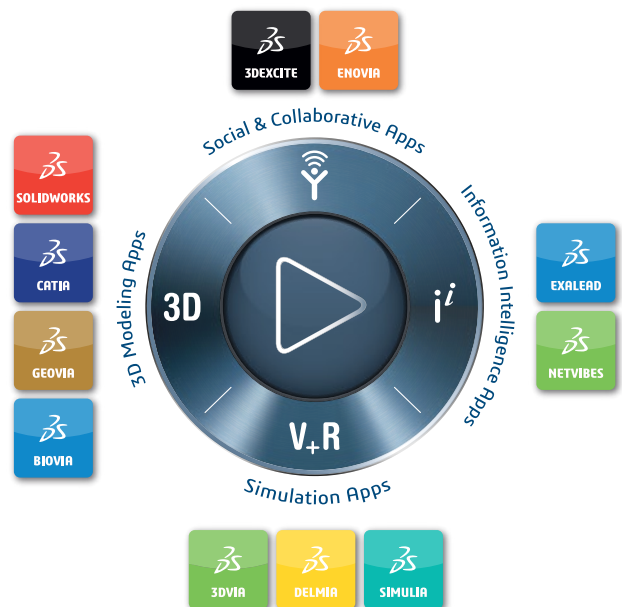
Wittur currently has approximately 100 users working with OnePart and the objective is to extend this to 1,000 users in the near future. "It's a step-by-step process, which will progress as we migrate all our drawings to our PDM system and index them in EXALEAD," Aichinger said. "Once this is done, we will add more users. We then plan to index other document types in our DIS and finally, to generalize 3D search by acquiring more OnePart licenses."

Aichinger believes information search should be fast and simple and the search tool adapted to the requirements of those using it. "At Wittur, many of our users are on the shop floor," he said. "They need to obtain the right drawing information as quickly as possible. EXALEAD OnePart is fast and its search results are pertinent and very precise. Those that are currently using it are happy to work with such a flexible, intuitive and easy to learn system and those not yet using it are eager to begin. Once we finish migrating our documents, their wish will come true."

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