

INEIGHT CASE STUDY:

HEIDELBERG MATERIALS

HEIDELBERG MATERIALS NORTH AMERICA PIONEERING DIGITAL COMMISSIONING WITH INEIGHT

Taking an industrial plant from the design stage through construction to Commission and into service requires significant investment in infrastructure and equipment. For Heidelberg Materials North America's new Mitchell, Indiana, plant, this process involved 67,000 technical drawings that needed to be reliably managed and shared between multiple parties.

By selecting InEight Document to store, manage, share and control electronic documents, Heidelberg Materials was able to ensure efficiency, speed, transparency and traceability throughout the process. As the commissioning team passes the baton to the operating team, the solution has created a valuable long-term knowledge base that will help maintain the plant in optimal working condition.

BENEFITS

- Streamlining the management and sharing of a large and complex set of documents
- Enabling rapid retrieval of technical information during commissioning and beyond
- Delivering clarity, efficiency and speed in support of a major engineering project

HEIDELBERG MATERIALS AT A GLANCE



Based in Irving, Texas, Heidelberg Materials North America is part of Heidelberg Materials, one of the world's largest integrated manufacturers of building materials and solutions. At the center of our actions lies our responsibility for the environment. We are pioneers on the road to carbon neutrality and circular construction. We're developing new, sustainable building materials as well as intelligent digital solutions.

MAKING COMPLEX PLANS A REALITY

The new Heidelberg Materials Mitchell plant in Indiana is a \$600+ million construction project to replace three existing kilns with a single kiln capable of producing 7,000 metric tons of cement a day. The new kiln and surrounding infrastructure includes a large amount of automated and/or instrumented industrial equipment, all of which must work smoothly and reliably, potentially for decades.

“The commissioning process aims to ensure that the construction and installation phases have been executed correctly, and that the plant is ready for final tuning and production,” says Ransom Blevins. “The Mitchell project will result in a fairly automated plant, which requires a significant amount of complexity to manage. We were anticipating the need to manage around 50,000 technical drawings, but we ended up with 67,000. There was no way to handle that volume without some kind of document control solution, particularly as we needed to be able to exchange documents with multiple external contractors.”

MAINTAINING A CLEAR VIEW

As part of the first digital commissioning project in the history of the corporation, Heidelberg Materials decided to use InEight Document to manage all project-related documentation. “InEight

was willing to work with us to make the pricing work for our needs,” says Marjorie Gore. “We originally designed the solution to help us during the design and build phase, but we also used it to help create our handover package to the plant management team.”

During the bid proposal, Heidelberg Materials used InEight Document to help manage the back-and-forth of documents and questions between its own team and the external contractors. The InEight solution stores a full history of the revisions made to technical drawings during the bid process and beyond. This made it possible for project engineers, equipment suppliers, and contractors to ensure the construction and fit-out ran smoothly.

“It’s easy to pull up the history of a technical drawing, and also to confirm that all parties have had access to the current version in the event of a contractual dispute,” says Marjorie Gore. “To help our field engineers, who work remotely on military-grade tablets, we leveraged the InEight Excel upload tool to create a list of hyperlinks so they could find and access drawings that had been downloaded from InEight. This allowed access to the drawings in locations without internet access. We could have done that manually, but with more than 9,000 drawings, it would have taken significantly longer.”

“*The commissioning process aims to ensure that the construction and installation phases have been executed correctly, and that the plant is ready for final tuning and production.*”

- Ransom Blevins,
Deputy Site Construction Manager

DEFINING EFFICIENT APPROVAL WORKFLOWS

Using the Lots module in InEight Document, the organization can set up a separate repository to manage commissioning-related information for each piece of equipment. Shared workflows in the InEight solution enable the efficient sharing of tasks and approval requests. For example, when a mechanical contractor is ready for a motor to undergo Mechanical (Manila) commissioning, they change the status in Lots to “Ready for Tagging” and then upload the alignment drawings to the relevant lot. The Electrical Contractor can follow the same process to upload the Megger readings to the Electrical (Blue) commissioning Lot.

“The commissioning manager then receives a daily report on equipment that is ready for tagging, and they can check the alignment drawings to confirm that everything is ready,” explains Marjorie Gore. “If the on-site inspector notices an issue with the equipment, he can take a digital photo of it, add it to the punch-list form, and send it to the contractor for resolution.” The Punchlists can be tagged with the type of lot so the Mechanical commissioning team can separate theirs from the Electrical Team.

Thanks to the InEight solution, the contractor has all the information they need to fix the issue and mark the equipment “Ready for Tagging” again. Each lot includes a user-defined checklist that must be signed off by three parties: the

contractor, the commissioning team, and the equipment supplier.

“Lots also provides a useful overview of the stage of each project: managers can see what has already been completed and what remains to be done,” says Marjorie Gore. “Once a lot is signed off and downloaded, the cover sheet is automatically saved as a PDF and all documents that were attached or uploaded to the Lot are downloaded as a zip file with the folder structure intact. Then plant personnel can then find all the commissioning information at a later date. For example, a maintenance engineer will be able to go into the lot and find the information they need without having to know how to filter all 67,000 technical drawings.”

ACHIEVING EFFICIENCY THROUGH DIGITIZATION

Now that the mechanical and electrical commissioning stages are complete, Heidelberg Materials is working on the final handover to plant operations. All the commissioning information and documentation is being uploaded to Heidelberg Material’s OnBase system to create a long-term repository of reference information. Employees will be able to search by keywords and quickly zero in on the equipment they need to check.

“In the past, commissioning work was done with printed documents, and we handed over whole filing cabinets to the plant management

“The commissioning manager then receives a daily report on equipment that is ready for tagging, and they can check the alignment drawings to confirm that everything is ready.”

- Marjorie Gore,
Document Control Manager

INEIGHT CASE STUDY

team,” says Dave Poling. “Nobody ever scanned the documents, so they weren’t easily searchable. Now, by contrast, we’re handing over drawing packages to the plant in a structure that makes it easy to pull up a piece of equipment and see the commissioning documents, together with any photos, testing, alignment and so on, plus details of who signed off the checklist. So, if there is ever an issue, the plant can quickly determine how to resolve it.”

BUILDING FIRM FOUNDATIONS FOR FUTURE GAINS

InEight Document helped Heidelberg Materials manage the complex digital commissioning for the Mitchell project by providing a clearly structured repository of shareable documentation.

“I work with a commissioning expert who has traveled the world working on major projects for more than 20 years,” says Ransom Blevins. “He’s thrilled with the software, because he can assign teams to tasks, see what contractors are working on,

and pull all the metrics he needs from the system.”

The Heidelberg Materials commissioning team brought external documents such as email into the repository, tagging them with the relevant equipment number in the Lots module for future reference.

“With InEight Document, we have full tracking capabilities, so we can step back through decisions and specifications to see why something was done in the way it was,” says Marjorie Gore. “Using the Gallery module, we can tag photos with user-defined labels so that they are also searchable and linkable to documents.”

InEight provides granular access to information based on each user’s credentials, which enabled Heidelberg Materials to restrict access to sensitive information such as bid values. It also keeps a full history of access to documents, making it easier to determine which party was at fault in a potential dispute.

“For example, if we ever had a dispute with a contractor, we could prove that we sent them the correct version of a technical drawing, and that they viewed it,” says Marjorie Gore. “That’s an extremely valuable benefit to have, given that we could be talking about million-dollar liability claims.”

Marjorie Gore concludes: “InEight Document enabled us to cope with the quantity and the complexity of documentation surrounding the Mitchell project. We could not have achieved this complex digital commissioning as efficiently as we did without the InEight solution.”

Want to learn more about how InEight is driving clarity, efficiency and speed in global construction and engineering projects?

LEARN MORE

ABOUT INEIGHT

InEight provides field-tested project management software for the owners, contractors, engineers and architects who are building the world around us. Over 300,000 users and more than 750 customers worldwide rely on InEight for real-time insights that help manage risk and keep projects on schedule and under budget across the entire life cycle. From pre-planning to design, from estimating to scheduling, and from field execution to turnover, InEight has powered more than \$400 billion in projects globally across infrastructure, public sector, energy and power, oil, gas and chemical, mining, and commercial.

For more information, follow InEight on LinkedIn or visit [InEight.com](https://ineight.com)