



Future Focus

The Mouat Company utilizes the latest modeling software to help clients visualize their industrial facilities prior to construction.

BY CHRIS PETERSEN

Even though it has an impressive history that reaches back 90 years, The Mouat Company continues to keep its focus on the future. This means the Birmingham, Ala., based design/build firm ensures that it utilizes the most advanced technology as it serves its customers in the indus-

trial sector. President Michael Morris says the company's embrace of highly sophisticated 3-D modeling software has made a remarkable difference to one of its latest projects for Halliburton, for instance.

Originally founded as an equipment distributor to the foundry industry, Mouat has evolved over the years to be-



"We're using 3-D CAD right now to the fullest extent possible."

// MICHAEL MORRIS, president

come a leading provider of turnkey industrial facility development. For more than 40 years, Mouat has designed facilities for customers in the foundry, frac sand and mineral-processing segments.





PROFILE

The Mouat Company

www.mouat.com | Headquarters:
Birmingham, Ala. | Specialty: Industrial facility
engineering and construction

These services are augmented by the company's design/build capabilities, which allow Mouat to see a project from the initial concept through the moment it begins operation.

Morris notes that Mouat has made extensive use of 3-D modeling software and video teleconferencing platforms in recent years. Not only do these applications allow the company to design facilities down to the very last detail in a virtual environment, they give Mouat the unparalleled ability to regularly collaborate with clients without having to necessarily travel to meet face-to-face. As the company's latest project for Halliburton demonstrates, Mouat's digital presence allows for a seamless transfer to real world application.

VIRTUAL REALITY

Mouat's most recent project is one of the company's biggest yet. For the last 19 months, the company has been building a 66,000-square-foot barite grinding facility for Halliburton in Dunphy, Nev. Mouat won the contract to build the Dunphy plant after successfully designing and building a similar plant for the energy giant in Louisiana about four years ago. "We have been told that this is the largest barite grinding plant in North America," Morris says.

The size and scope of the project – not to mention the remote and isolated nature of the project site – made Mouat's use of modeling and teleconferencing software a perfect fit for the project.

Morris says the software has proven its usefulness on many other projects in the company's portfolio, as well.

"With the utilization of technology, we have been able to break down geographic barriers and open up communications that extends our markets tremendously," he says. "Finding ways to allow people to collaborate is one of the keys to our success. With the tools we have put in place, we can connect our customers on a job site in central Asia along with their corporate office in the U.S. to enable the entire team to walk through their facility as it is being designed. This technology provides connectivity that was not possible just a few years ago."

The company's 3-D modeling software does more than show clients a rough, virtual model of what their project could look like once it is constructed – it incorporates extensive detail of the equipment and the facility, scaled to the proper dimensions.

Since Mouat's fabricator uses the same software, the dimensions for the fabrications are downloaded into CNC machines that are used to cut and punch the steel. The result is an identical reproduction of the model.

The company holds meetings with clients every week, reviewing the progress of the project with the help of the virtual model and identifying issues that need to be ironed out before they have a chance to hold up construction. For example, Morris says, "The Halliburton project involved intricate platforms around the two grinding mills. There are a number of considerations in designing the platforms including access to the equipment in key areas for maintenance. This was a multi-tiered platform, and we had to make sure that one

level does not create an obstruction for the other. In the past, platforms were designed and fabricated, then modified in the field a number of times to get them as the customer desired. This can be extremely expensive. For this project, we reviewed the design of the platforms around the mills in several meetings, continuously refining them. At this point, they have been installed and are exactly as envisioned by our engineers and the client."

GREATER ENHANCEMENTS

Mouat's advanced technology also is helping it develop another project, this one located in central Asia. Morris says the company utilizes this software at every stage of each project, but the potential for further improvements is strong. "We're using 3-D right now to the fullest extent possible," Morris says. "It's as good a tool for construction as it is for collaboration."

Mouat expects the process to become even smoother in the future as more of its partners make the switch to the software. As fast as the process is now, Morris says, it is impeded somewhat by the need to render many of the vendors' drawings from conventional CAD to the virtual environment. "I think the one thing that we're looking forward to is having more of our vendors incorporate 3-D modeling into their work," Morris says. Once 3-D modeling becomes the norm, Mouat stands to reap even greater benefits from its use. "It is the most significant innovation to the design/build business since CAD became commercially available over 25 years ago. We feel that providing innovative solutions for our customers starts with finding innovative solutions for ourselves." [EMI]