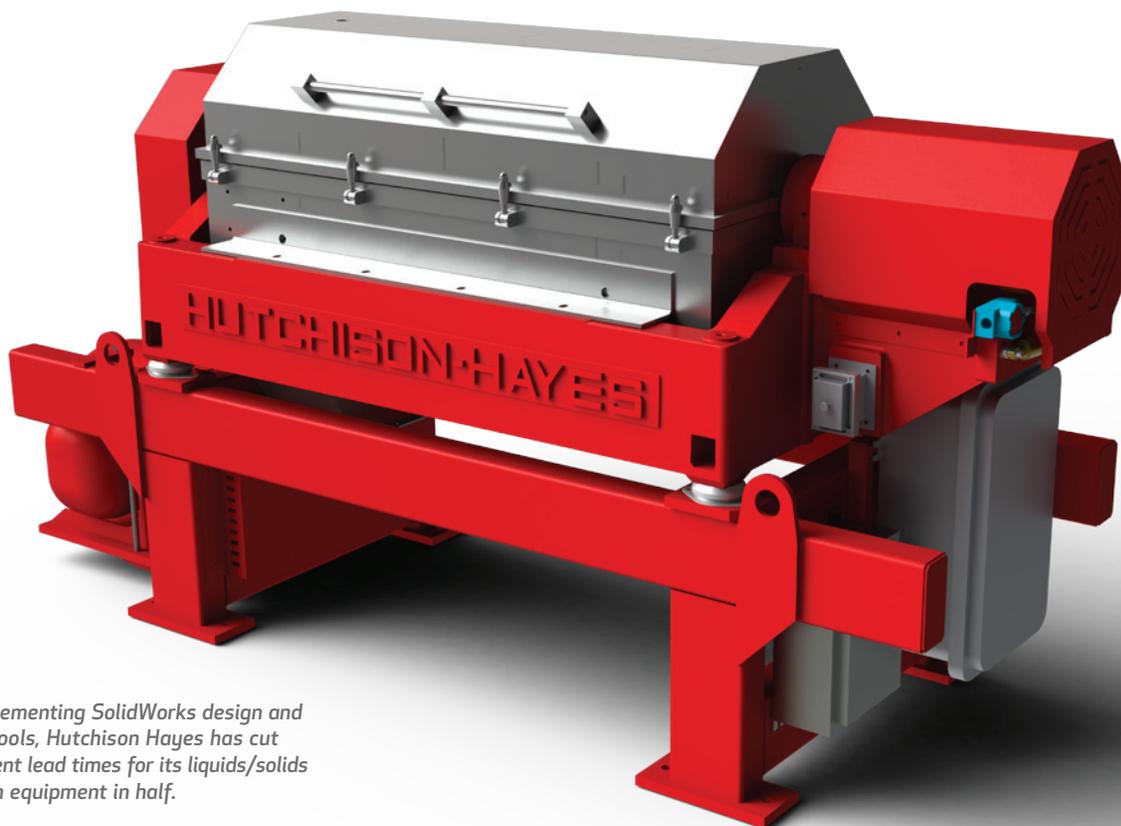


HUTCHISON HAYES SEPARATION INC.

Delivering liquid/solids separation equipment faster with SolidWorks



Since implementing SolidWorks design and analysis tools, Hutchison Hayes has cut development lead times for its liquids/solids separation equipment in half.

When it comes to separating solids from liquids—whether in oil fields, petrochemical plants, meat-processing facilities, or in the production of vegetable oil, marine fuels, and biodiesel—centrifuges, decanters, and separators from Hutchison Hayes Separation Inc., often play an important role. The Houston, Texas-based company pioneered the development of liquid/solids separation technology for the oil-well drilling industry back in 1928. Today, Hutchison Hayes continues to be a major supplier to oil and gas services companies, like Halliburton and Baker Hughes, but has expanded into other markets that use separation equipment.

Supporting growth and expanding its product line were the primary reasons that Hutchison Hayes decided in 2005 to reevaluate the AutoCAD® 2D and Autodesk Inventor® 3D design software that it had used, according to Sales Manager Hans van der Voort. “Although we were successful using those tools to support our standard product line, our business plan required us to develop new products for additional applications,” van der Voort recalls. “To support the increased activity, we needed a 3D development platform that would enable us to tighten up development and manufacturing. By doing so, we could shorten delivery lead-times and free up resources to go after new opportunities.”

CAD/CAM Engineer David Moore’s first assignment upon joining Hutchison Hayes was to evaluate its CAD tools and make a recommendation on a solution that would support the company’s goals. “I had used SolidWorks® software in college and knew that it was the best available CAD tool to meet our needs,” Moore explains. “It also provided the integrated structural simulation tools that we needed to validate our products and ensure that manufacturing would go smoothly.”

Challenge:

Shorten delivery times and improve manufacturing of liquid/solids separation products to support growth through expansion of its product line.

Solution:

Implement SolidWorks Premium design and SolidWorks Simulation Professional analysis software to streamline development and manufacturing.

Results:

- Cut lead-times by 50 percent
- Streamlined sales process
- Improved manufacturability
- Supported 20 percent annual growth rate

Hutchison Hayes standardized on SolidWorks Premium design software and soon added SolidWorks Simulation Professional analysis software. "SolidWorks gave us the best bang for the buck and provided the range of design, simulation, and communication tools that we needed," Moore says.

Quicker development, shorter lead-times

After implementing SolidWorks solutions in 2005, Hutchison Hayes went to work on redesigning its product line to obtain the productivity gains that it needed to shorten delivery times and improve manufacturing.

"We focused on our core products with an eye toward constantly improving things," van der Voort notes. "SolidWorks enabled us to streamline our design process and our interaction with our machine shop. For example, our equipment operates on skids, and we saw dramatic improvements from redesigning our skid weldment. Overall, SolidWorks has enabled us to cut our lead-times by 50 percent. These improvements are particularly impressive because with centrifuges, the quality of our machining has to be good."

"With SolidWorks, we can quickly iterate on our basic concepts to expand our product line, such as making a bigger decanter from an existing design," Moore adds. "In short, SolidWorks makes the development process more efficient."

Simulation enhances manufacturing performance

By using SolidWorks Simulation Professional analysis software to validate the structural integrity of its products, Hutchison Hayes has efficiently redesigned its product line to improve how its equipment is manufactured. The company uses the integrated analysis application to conduct stress analyses on its equipment and skids to ensure the redesigned products will perform as intended.

"We have redesigned our products to improve manufacturability without losing quality and functionality," Moore explains. "Our equipment has to be rugged and durable. For example, it has to withstand abuse, such as when a roughneck slams it with a wrench or bangs it with a hammer. Although we use the most durable tungsten carbide parts to extend service life, SolidWorks Simulation Professional software gives us the confidence that we have engineered our products for the worst-case scenario."

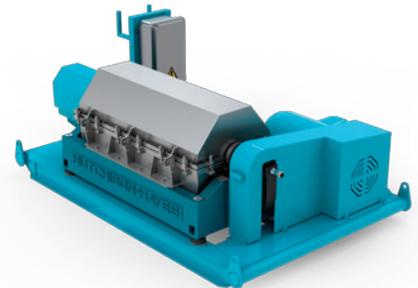
Visualization improves communications and sales

Since implementing SolidWorks solutions, Hutchison Hayes has realized an annual growth rate of 20 percent. While some of its growth is market-driven, van der Voort attributes a portion of it to the benefits of using SolidWorks design tools to increase efficiency, and SolidWorks visualization and communication tools to support sales efforts. The company routinely utilizes SolidWorks eDrawings® to communicate internally and externally, and regularly takes advantage of SolidWorks graphics in sales situations.

"From a sales perspective, SolidWorks is helping us grow," van der Voort stresses. "We use eDrawings extensively with customers, and having 3D renderings available is a substantial improvement from the black-and-white 2D pictures that we used in the past. It helps to accelerate the selling process."

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David Moore
CAD/CAM Engineer



In addition to shortening lead-times and improving manufacturing performance, SolidWorks solutions help Hutchison Hayes grow its business through improved design visualization, better communication, and more effective sales support.



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