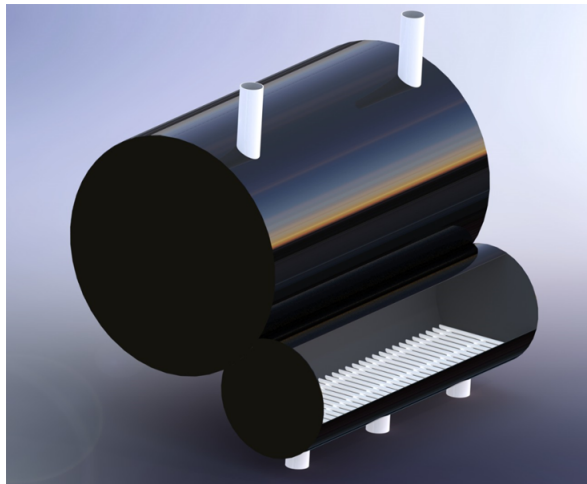


ANSYS + Jacobs Analytics

"I could see walking into a customer, cracking open a laptop with a clean sheet and saying, 'Now what do you want?' Or I could say, 'This is what we've got. Let's optimize it.' The CAD tool should be an extension of your imagination and the design process, rather than a hindrance and a limitation. You can use ANSYS SpaceClaim to come up with six new ideas in five or ten minutes. It's huge."

**Travis Jacobs, Owner
Jacobs Analytics**

Jacobs Analytics Streamlines Design Preparation, and Speeds Analysis and Innovation with ANSYS SpaceClaim



Technology Used

ANSYS® SpaceClaim
ANSYS® Workbench™
ANSYS® CFX™

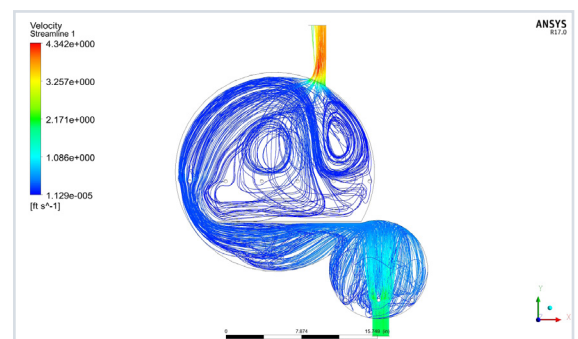
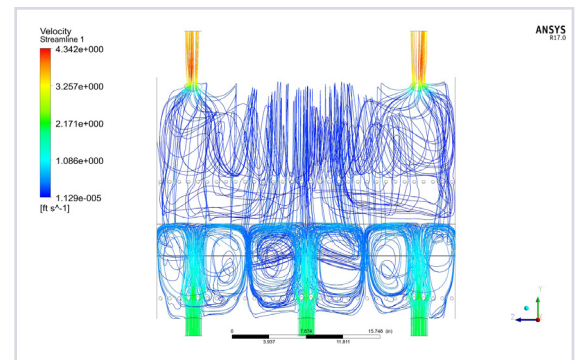
Engineering Solution

After integrating SpaceClaim into his analysis workflow, Jacobs was able to import and edit the CAD design for the food smoker without leaving the ANSYS simulation environment. He used SpaceClaim to modify the geometry in minutes instead of hours. And because of the tight integration between SpaceClaim, ANSYS Workbench, and ANSYS CFX, he was able to perform full simulations in hours instead of days or weeks.

Jacobs Analytics, an independent consulting firm, provides design and analysis engineering services for large and small manufacturers. Based on over a decade of experience performing CFD and FEA analysis on manufacturing equipment and body-armor products, Travis Jacobs chose the ANSYS simulation environment for his diverse range of projects. Adding ANSYS SpaceClaim to the workflow for design and analysis preparation enables him to improve CAD accuracy while dramatically cutting preparation time.

Challenges

As an independent analysis engineer, Jacobs cannot afford to spend unnecessary time and effort fixing faulty CAD designs. While optimizing the design of a food smoker, Jacobs found that transferring ideas to a traditional CAD tool was frustrating and time consuming. He produced a design that he thought was ready for simulation, only to discover that it was riddled with geometry errors. It took weeks to fix the geometry and create a full simulation.



Benefits

Jacobs has changed his design system, starting with a fluid domain he optimizes then feeds back into the original design. He estimates he has reduced the time it takes for analysis preparation by 80 to 90 percent, so he can now spend that time on analysis and design iterations. By cutting out redundant processes, he is able to assist his clients in developing more ideas and innovations while speeding the time to market.

In one case, he saved a client \$75,000 and reduced testing time from one year to just six months, while still generating 10x the number of design iterations.

Company Description

Jacobs Analytics focuses on developing new and innovative products and applying science and analysis to optimize the design. He uses simulation to help his clients build higher quality products at a lower cost. Jacobs also designed and produces a ceramic food smoker that can be monitored and controlled from any location.

