COMPANY
Velan Valve Corp.

LOCATION
Montreal, Quebec, Canada

SOFTWARE
Autodesk® Simulation CFD

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>
> —**Stan Isbitsky**
>   Senior Engineering Manager
>   Velan Valve Corp.

Under pressure

Velan reduces its product development cycle by six weeks the first time it uses Autodesk Simulation CFD
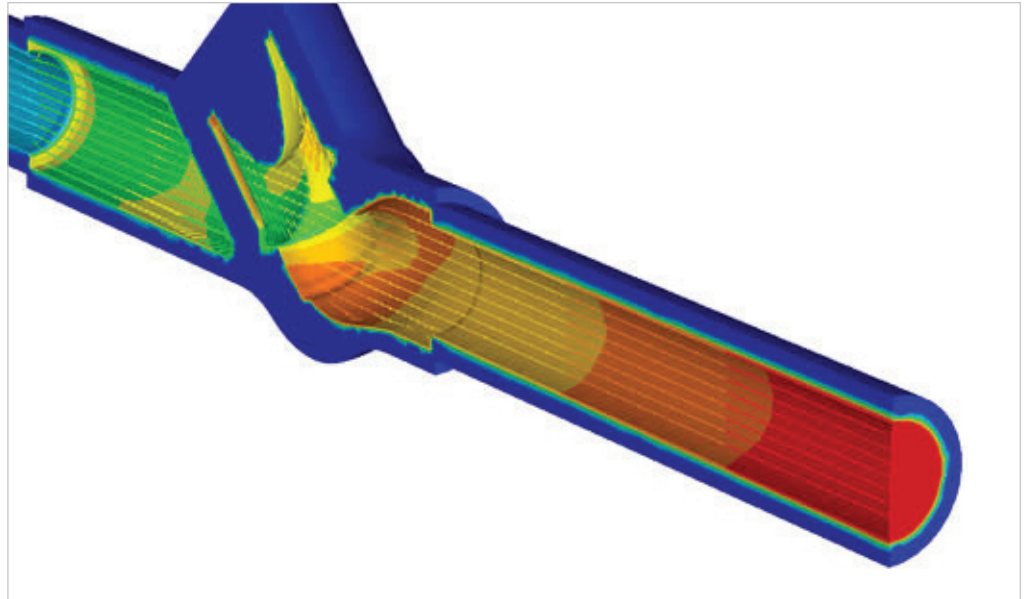

Image courtesy of Velan Valve Corp.

Velan Valve Corp., based in Montreal, Quebec, designs and manufactures cast and forged steel valves and steam traps for a wide range of industries that rely on industrial-grade equipment—from oil and gas to chemicals to mining. When one of its top customers, Imperial Oil, needed a forged globe valve with a high flow coefficient—and fast—Velan's engineering team decided there was no time like the present to see what their newly purchased Autodesk® Simulation CFD solution could do.

Stan Isbitsky, senior engineering manager at Velan, installed the CFD software and immediately went to work within PTC® Creo® (formerly Pro/ENGINEER®). "To increase the valve's flow coefficient, we experimented with a wishbone-shaped outlet, as opposed to having a single bore on the center plane of the valve," says Isbitsky. "Once we confirmed a promising valve design in Autodesk Simulation CFD, we machined and flow-tested a physical prototype. We were within a few percentage points of the calculated pressure drop predicted by the software."

The parametric relationship Autodesk Simulation CFD has with native PTC Creo assemblies and

automatic meshing features saved the engineers at Velan valuable design time as well. "I didn't have to do anything special in terms of meshing," says Ibitsky. "I just specified a single mesh parameter for the volume, and let the automatic meshing work."

With Autodesk Simulation CFD, Velan's engineers also were able to try out several different scenarios, identify what was working, and use physical prototyping as a final verification tool. This process allowed the team to shorten the product development cycle by six weeks. "We could test out valve designs early in the process with Autodesk Simulation CFD, which helped us to improve our design substantially," says Isbitsky. "The traditional design process would have been based more on intuition than science."

He adds, "Autodesk Simulation CFD easily paid for itself on that first project."

To learn more about Autodesk Simulation CFD, visit **www.autodesk.com/simulationcfd.**

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