BABCOCK POWER USES MODELON IMPACT TO PREDICT BOILER PERFORMANCE.

A recent case study with Babcock Power shows how the company uses Modelon Impact to predict and improve utility-scale boiler performance in a changing energy landscape, including incorporating new fuels and renewable energy sources.

Global energy production is evolving to help slow the effects of climate change. When implemented properly, renewable energy and other intermittent sources can cut carbon emissions, perform well in diverse scenarios, and be cost-effective. The increase in renewable energy production provides unique challenges to existing fossil plants that have historically been base load and are now routinely used as either peak or load following units. This puts strain on all plant systems, as they respond to changing demand by adjusting temperatures, pressures, and flows. Babcock Power is the global leader in energy-related products and services including natural gas conversions and additions.

As a Modelica-based system modeling and simulation tool, Modelon Impact gave Babcock Power critical customization abilities. Combining validated library components from Modelon's Thermal Power Library with Babcock's proprietary code was crucial to developing the model. In addition to Modelon Impact's drag-and-drop user interface, Babcock Power's team can edit the model's code, which synchronously updates the graphical representation of the model.

Moritz Hübel, Industry Director at Modelon, said, "Combining the specific knowledge from Babcock Power with the knowledge embedded in Modelon Impact component libraries enabled very efficient use of system modeling for their application."

With Modelon's experts, the Babcock Power team built a hierarchically structured model consisting of a master model and many component models. This structure allowed subcomponents to be added, removed, or replaced with modules of different levels of detail. The power plant system leveraged the Thermal Power Library's pre-built sub-models and media property models. The model matched the original and modified drawings of the power plant operated by one of Babcock's customers.

Michael Johnson, Senior Engineer from Babcock Power, said, "Doing transient analysis of the model in Modelon Impact gives us insights to share with our customers and increases their confidence in our offering. Our collaboration with Modelon helps us stay at the forefront of our industry."

Read the complete case study here: modelon.com/support/enhancing-design-and-system-performance-for-direct-combustion-boilers/.

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About Modelon

Modelon offers systems modeling and simulation software that accelerates product innovation, development and operations in a range of industries. Modelon's flagship product, Modelon Impact, is a cloud-native system simulation software platform featuring a collaborative browser-based interface and thousands of proven models and components spanning a broad range of applications. Headquartered in Lund, Sweden, and with global reach, Modelon is an expert industry leader in model-based systems engineering with a focus on leveraging open standard technologies.
Modelon AB is listed on Nasdaq First North Growth Market with ticker symbol MODEL. Redeye AB is appointed the Company's Certified Adviser.

About Babcock Power Inc.

Babcock Power Inc., www.BabcockPower.com, through its subsidiaries, is one of the world's leading suppliers of technology, equipment, and services to the power generation industry. Babcock Power subsidiary companies include Vogt Power International Inc. (Louisville, KY), Thermal Engineering International (USA) Inc. and Struthers Wells (Cerritos, CA), Babcock Power Environmental Inc., Riley Power Inc. and Babcock Power Services Inc. (Marlborough, MA), Boiler Tube Company of America (Lyman, SC), TEi Construction Services, Inc. (Duncan, SC), Geo-Synthetics Systems (Waukesha, WI).

Attachments

Babcock Power uses Modelon Impact to predict boiler performance.