PRESS RELEASE
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TAKENAKA CORP. SELECTS MODELON IMPACT FOR HVAC SYSTEM SIMULATION AND OPERATIONAL TUNING

Takenaka Corporation, a large Japanese engineering contractor, has selected Modelon Impact for system simulation of heating, ventilation & air conditioning (HVAC) in commercial buildings. Takenaka has partnered with Modelon to optimize HVAC performance, both at design and operational stages, using physics-based modeling, robust HVAC-specific Modelica libraries, and scalable cloud-based simulation. The approach includes coupled analysis with EnergyPlus for more accurate control logic tuning.

Modelon Impact's intuitive user interface and accessible documentation accelerated the Takenaka team's learning curve and facilitated their first experience with simulation using the Modelica Buildings Library. In an initial project, Modelon's team guided Takenaka through building a simulation model of a single-floor HVAC system, enabling them to test control logic and optimize settings. Through this collaboration, Takenaka successfully built an HVAC system model including the building energy plant and validated the feasibility of coupled analysis with EnergyPlus. This enabled the team to define optimal equipment settings and control logic, paving the way for improved energy performance during operation. The project also enhanced Takenaka's in-house simulation capabilities, allowing Takenaka to take on more ambitious simulation projects. As a next step, models of medium to large scale buildings will be used for validation with operational data.

The team of Kitoshi Tanaka, Chief Researcher at the Research and Development Institute of Takenaka Corporation, is at the forefront of developing advanced air conditioning systems to achieve energy conservation and occupant comfort in Net Zero Energy Buildings (ZEB). However, even with an energy-efficient prototype design, gaps often emerge between design intent and real-world performance due to mismatches in equipment settings and operational conditions. Recognizing the need to bridge this gap, Takenaka sought to integrate system simulation into their workflow to enable both design optimization and ongoing operational improvement.

"In addition to its extensive library, Modelon Impact features an intuitive user interface that makes it easy to visualize the system configuration, with readily accessible documentation for each component. This made it easy for us to work with the models from the very start," said Kitoshi Tanaka, Chief Researcher at the R&D institute of Takenaka Corporation.

"We are pleased and humbled that Takenaka selected Modelon Impact for their system simulation, and we are looking forward to our continued collaboration," said Ikuko Yamanaka, Director of Modelon KK.

Read the complete case study here: https://modelon.com/support/hvac-system-simulation-takenaka-corporation/.

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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 Takenaka Corp.

Takenaka Corporation is one of the largest engineering contractors in Japan, providing architectural, engineering, and consulting services. Takenaka Corporation's Technical Research Institute is dedicated to optimizing building design and controls that support Net Zero Energy Buildings (ZEB).

Attachments

Takenaka Corp. selects Modelon Impact for HVAC system simulation and operational tuning