

Swedish world news:

Combining Concrete and AI

Offering forecasts for strength development

Gothenburg, October 7th, 2021

In a world-first, Thomas Concrete Group and Thomas Betong in Gothenburg have solved that many in the construction industry have long called for: access to a real-time forecast for the future strength development of concrete.

A combination of digital strength measurements from sensors in the concrete, a large amount of historical data from previous measurements, and weather forecasts for the coming days calculate the forecast. Based on the data gathered, it is possible to predict the hardening process of the concrete.

The main advantage of this is that you see how the strength of the concrete develops and provide a real-time forecast for future development. Therefore, you can better plan the work at the construction site.

“The forecast makes it possible to plot the future strength development of the concrete easily. If necessary, measures can be taken to ensure the quality of the casting and avoid cracking. The construction process can be streamlined by making decisions in advance regarding future resource requirements, such as personnel, equipment, and other factors that save both time and money,” says Lennart Björnström, CIO and Head of Business Development at Thomas Concrete Group.

Measuring strength in real-time is nothing new. Using AI (Artificial Intelligence – machine learning and trained models) and future weather data to forecast the concrete’s strength development in real-time is, however, something that has never been done before

Input data for digital strength measurement and forecasting is collected with the help of sensor equipment, on which the company collaborates with the Danish tech start-up Sensohive.

This innovation evolved from a service previously introduced in Thomas Betong’s customer portal, My Concrete[®]. In the portal, users can also follow ongoing concrete deliveries directly on their smartphones in real-time. In addition, customers avoid keeping track of paper in the form of delivery notes for signing because all this is done digitally. It will also be possible to forecast the concrete’s strength development as a digital service in the portal.

“Digitalization has an impact on sustainability, as well as efficiency. In the app, you can also see how much concrete has been delivered, and this enables you to adjust orders to ensure that concrete does not go to waste,” explains Lennart Björnström.

“Digital forecasting is yet another important milestone for us, as we once again demonstrate that we are at the forefront of technical development and sustainability in our industry,” says Hans Karlander, CEO of Thomas Concrete Group.

Among its other achievements, the company was the first in Sweden to offer low-carbon concrete, concrete with a significantly lower carbon footprint than the traditional product. It also recently invested in Sweden’s first series-produced, fully electric concrete truck.

For more information, please contact:

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About Thomas Concrete Group AB *Thomas Concrete Group is a Swedish family-owned group that produces and distributes high-quality concrete products and services. The company was established in 1955 in Karlstad, Sweden, by Martin Thomas and operations are currently conducted in the USA, Poland, Germany, Norway, and Sweden. The head office is in Gothenburg, Sweden. The group has about 2,100 employees, produced 5.4 million m³ of concrete and had sales of approximately SEK 7.5 billion in 2020. The subsidiary in Sweden is Thomas Betong AB. www.thomasconcretegroup.com*

About Thomas Betong AB

Thomas Betong is a Swedish company with over 60 years of experience in producing ready-mixed and precast concrete for both residential and civil engineering structures. Ready-mixed concrete is produced at 34 concrete plants and precast concrete elements come from three plants. In addition to concrete, the company also offers a broad range of services, such as technical advisory services, design, transport and pumping. Thomas Betong is part of the Swedish, family-owned Thomas Concrete Group AB, with operations in Sweden, Norway, the USA, Germany, and Poland. www.thomasbetong.se