



CASE STUDY

Aizawa Concrete Corporation

How one of CarbonCure's first customers is accelerating sustainable construction in Hokkaido, Japan

Introduction

[Aizawa Concrete Corporation](#) was established almost 90 years ago in Tomakomai, the largest city in the Iburi subprefecture of Hokkaido, Japan. Today the company has plants located across the country including 15 ready mix concrete plants, 11 precast manufacturing facilities, one large pile factory, and one specialized residential precast foundation factory.

The company began using CarbonCure in some of its precast and structural concrete mix designs to achieve carbon savings and contribute to its NETZERO35 commitment. The intention is to roll it out across all mixes once it is included in the building codes or Japanese Industrial Standards (JIS).

Aizawa's Environmental Focus

Aizawa is a forward-thinking, ethical, and environmentally conscious company dedicated to offering high-quality products and services to the Japanese communities it serves. With a strong focus on sustainability, Aizawa is committed to fully decarbonizing the business, including its supply chain, by 2035.

Recognizing that there is no one-size-fits-all solution to decarbonizing concrete, Aizawa has explored various innovative technologies over the years. In 2017, for instance, the company secured exclusive rights

Aizawa's Sustainability Progress



14,351 square meters of sustainable concrete made with CarbonCure poured



Over 300 metric tons of CO₂ savings enabled



4,473 truckloads of sustainable concrete made with CarbonCure delivered



170 hectares of forest absorbing CO₂ for a year

to distribute [self-healing concrete](#) in Japan. This groundbreaking product incorporates bacteria that consume polylactic acid, generating calcium carbonate to fill in cracks. As a result, the concrete's lifespan is extended, reducing the need for carbon-intensive repairs or replacements.

Aizawa and CarbonCure

The Senior Vice President of Technology Development at CarbonCure, Dr. Sean Monkman, introduced Aizawa's technical laboratory staff to the scientific principles behind the technology, as well as the sustainability and efficiency advantages it offers. The team was immediately captivated and decided to implement CarbonCure in both their precast and structural mixes.

Throughout the implementation process, CarbonCure provided comprehensive support to the Aizawa team—from installation to testing—ensuring that they could fully capitalize on the benefits of the technology.

Initially, Aizawa's adoption of CarbonCure was motivated solely by its sustainability advantages. However, the company soon discovered additional benefits, such as increased cost efficiency due to cement reduction and new business opportunities arising from the growing number of environmentally conscious clients in the provinces it serves.

Regulatory Compliance

Japan's High-Pressure Gas Safety Act meticulously regulates the entire life cycle of high-pressure gasses, including CO₂ used in CarbonCure technology. This comprehensive oversight covers the manufacturing, sale, transportation, consumption, and disposal of high-pressure gasses. To utilize CO₂ or other high-pressure gasses, companies must obtain a permit from prefectural governors, which is granted only after a thorough inspection of facilities to ensure compliance with specific technical standards.

Before Aizawa could implement CarbonCure, the team needed to secure approval for the installation of storage tanks, piping, and valves, as well as arrange for an authorized gas supplier to be on-site during the installation process.

Implementation and Roll Out

Once the CO₂ tanks were set up in accordance with the regulations, the CarbonCure technology was installed quickly.

CarbonCure provided support to the Aizawa team to define the optimal dosage ranges for their mixes and assisted with testing to ensure and optimize performance at each plant. The technical team is consistent in its testing and QC processes to ensure every mix is performing as intended.

"CarbonCure is one of the important measures we are implementing to meet our commitments to NETZERO35. As soon as Japanese Industrial Standards approves it, we intend to add CarbonCure to all our concrete products."

Toru Sakai

Senior Managing Director | Aizawa

"CarbonCure was an easy decision for our team. The capital investment cost was minimal, the technology was simple to integrate across our factories, and the potential for carbon removal was substantial."

Toru Sakai

Senior Managing Director | Aizawa

What's Next for Aizawa?

At present, Aizawa utilizes CarbonCure to produce precast piles for detached house construction and unreinforced concrete. Contractors who employ these solutions promote the advantages of low carbon construction to their customers.

Upon the inclusion of CarbonCure in JIS standards, Aizawa plans to assess the technology's effectiveness across all its ready-mix designs, with aspirations of implementing it on a broader scale in the near future. We look forward to continuing to support their team on their path to NETZERO35.



"The concrete industry needs to accelerate decarbonization as soon as possible so every producer should be using CarbonCure to reduce cement content — and remove carbon dioxide — without affecting the performance of the concrete."

Toru Sakai

Senior Managing Director | Aizawa

Build your business. Build with CarbonCure.

CarbonCure has been used on thousands of projects ranging from healthcare to higher education, residential developments, and corporate campuses.

For more information about building with CarbonCure concrete, visit carboncure.com. To get in touch with a CarbonCure representative, send us an email at info@carboncure.com or give us a call at +1 (902) 448-4100 (Worldwide) or +1 (844) 407-0032 (North America).