

Use of CO₂ in Concrete / Investment in CarbonCure and Formation of Partnership

As a part of the efforts to reduce its environmental impact, Mitsubishi Corporation (MC) is pleased to announce that it has invested in CarbonCure Technologies Inc. (CarbonCure), a Canadian company that has a CO₂ utilization technology which injects CO₂ into concrete. MC and CarbonCure have partnered to expand the business of CarbonCure and deploy low-carbon concrete solutions across the construction industry.

The CO₂ utilization technology of CarbonCure enables concrete producers to decrease the amount of cement, an industrial source of CO₂ emissions, used in mixes by mineralizing CO₂ in the ready-mix concrete, and effectively reduce the embodied carbon, the emissions from materials and construction, that has become an issue to be solved associated with the building sector. CarbonCure's technology is already commercialized and widely used, especially in North America, because the product's strength and reliability are the same as with conventional concrete.

Based on the recently formed partnership with CarbonCure, MC will support the deployment of CarbonCure's technology in Japan and other Asian countries by leveraging its global network and will work together to solve the issue of CO₂ emissions in construction.

As concrete is an indispensable material for civil engineering and building structures, and it is widely used worldwide with a vast market scale, MC focuses its efforts on CO₂ utilization technology for construction materials as a promising innovative technology.

Besides, MC will deepen the collaboration with other related projects and technologies such as zero-emission ecological concrete called CO₂-SUICOM*¹ and CO₂-sequestered aggregates that is developed by Blue Planet*², and, through commercialization initiatives in the field of use of CO₂ in concrete, will strengthen its efforts to simultaneously create three values: economic, societal, and environmental value.

CarbonCure's Technology

1. By retrofitting the equipment on the existing ready-mix concrete plant facilities, CO₂ can be injected into ready-mix concrete. Low-cost and seamless deployment can be achieved without changing the manufacturing process or disrupting plant operations. The equipment is provided on a lease model with no upfront capital cost.
2. Injected CO₂ can reduce the amount of cement needed in concrete mixes while still maintaining strength requirements, which leads substantial carbon footprint reductions.
3. A digital solution to visualize CO₂ footprint is also provided.

Building A Greener Future

with  CARBONCURE.



1. Waste CO₂ emissions are collected from local industrial emitters by gas companies and then purified.
2. The purified CO₂ is stored onsite at the concrete plant and connected to CarbonCure's technology.
3. CarbonCure's technology injects CO₂ into the fresh concrete to create high-performing, low-carbon concrete.
4. Private and public projects are built with CarbonCure concrete, reducing embodied carbon in new buildings.

Link to explainer video: http://bit.ly/carboncure_video

Overview of CarbonCure

- CarbonCure was founded by Robert Niven, the founder and CEO, in 2007 in Nova Scotia, Canada.
- It is known as a leading global company that provides CO₂ utilization technology in concrete that has a track record of more than 275 units for 47 companies across North America and beyond.
- CarbonCure set out on a mission to reduce the CO₂ emissions from the concrete industry by 500 megatonnes annually by 2030. In total, CarbonCure concrete producers have achieved more than 100,000 tonnes of CO₂ savings to date.
- With the aim of further growth, it successfully completed the funding round co-led by Amazon and Breakthrough Energy Ventures in September 2020, where Microsoft and other investors participated.

*1 [R&D on Use of CO₂ in Concrete \(August 5, 2020\)](#)

*2 [Use of CO₂ in Concrete / Partnership with Blue Planet Systems Corporation \(September 23, 2020\)](#)