

Canadian Concrete Masonry Producers Association (CCMPA) is working with Department of Civil Engineering at McGill University to investigate the possibility of using carbon dioxide curing to replace steam curing in concrete masonry unit (CMU) production. Carbon dioxide curing of CMU is a carbon sequestration process. The reaction takes place between cement binder and carbon dioxide to form a hybrid microstructure of CSH with CaCO_3 . Carbonated CMUs can have comparable strength to steam curing but exhibit better resistance to shrinkage, absorption, sulphate attack and freeze-thaw cycling. The technology has gained renewed interest recently due to the fact that large quantity of high purity and low cost CO_2 will be available in near future as a result of emission regulation. CMUs have the potential to utilize the recovered CO_2 and claim carbon credits. The collaborative research is focused on developing innovative technologies to achieve the carbon uptake targets and formulating a network model for CO_2 recovery, transport and utilization to benefit both CO_2 sources and sinks. The project is supported by Natural Science and Engineering Research Council (NSERC) of Canada and CCMPA.

