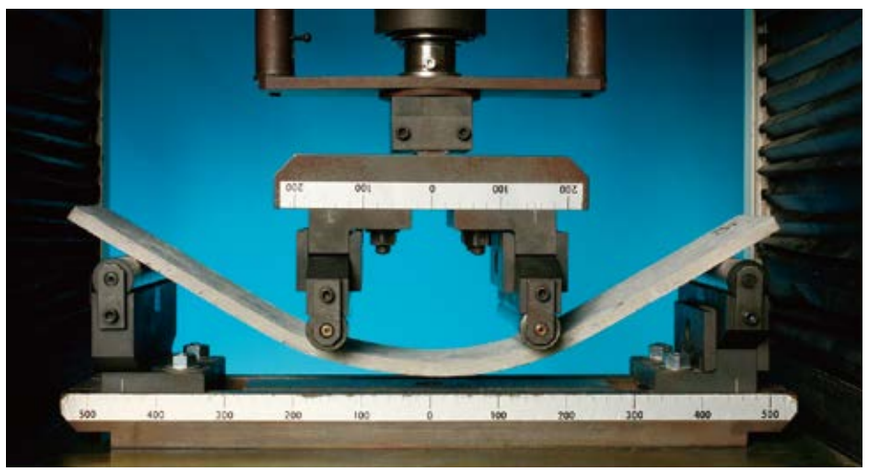
High ductile cementitious composites

ECC

Engineered Cementitious Composite

ECC is a cementitious material that can largely deform against tensile force. It deforms with the cracks being controlled within a minute range to become superior in suppressing permeation of degradation factors such as chloride, and delivers high durability.

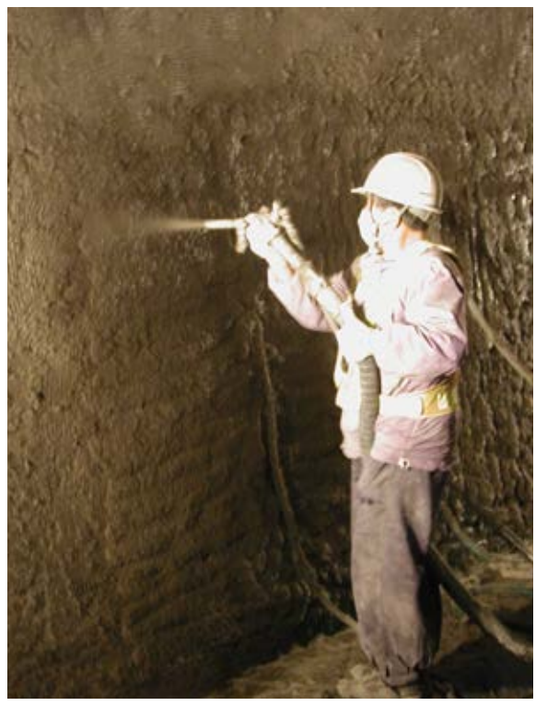


Excellent de formation performance of ECC

Application to civil engineering structures (repair and reinforcement)

ECC is applied to various structures by making use of its excellent deformation performance and high durability.

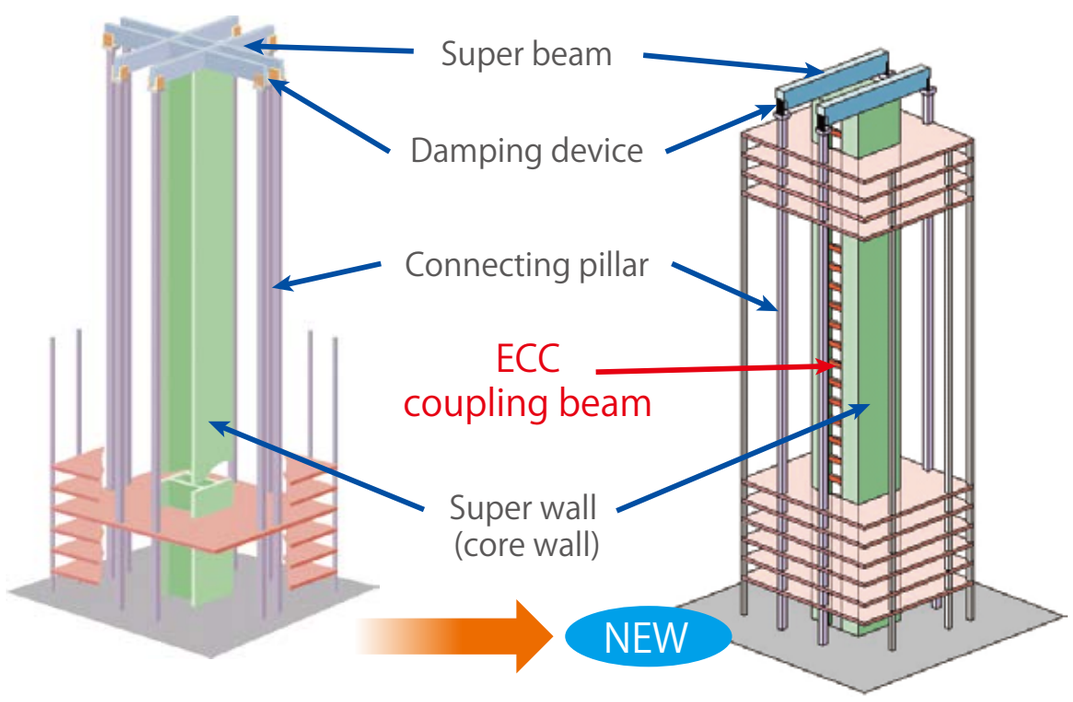
- Reinforcement inside tunnels (JR East)
- Carbonation restraint in viaducts (JR Central)
- Improvement in cut-off performance of dam bank body (Mitaka Dam)
- Improvement in water impervious property of a reservoir bank body (Tottori Prefecture, Kochi Prefecture)
- Improvement in smoothness and cut-off performance of irrigation canals (Wakayama Prefecture, etc.)
- Elimination of joints of expressways (Metropolitan Expressway)
- Corrosion inhibition of steel piers (Metropolitan Expressway)

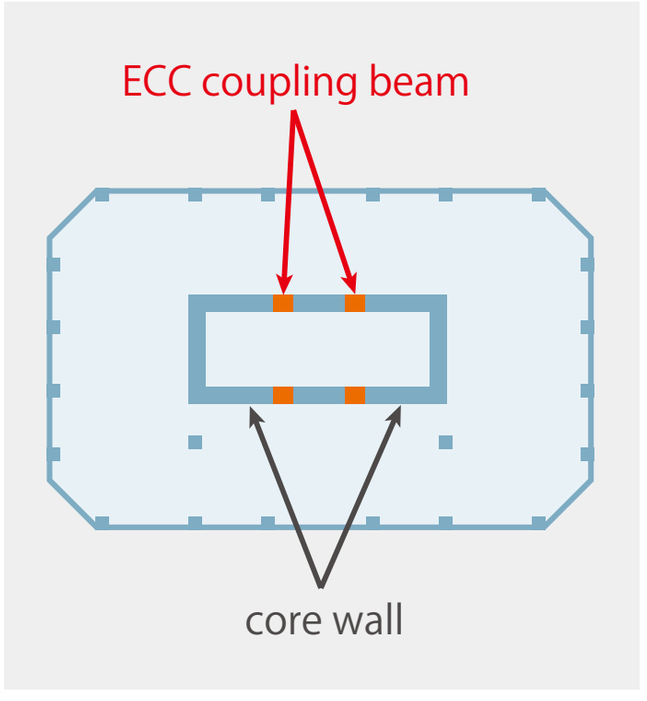


Example repair with direct spraying ECC shot

Application to building structures (high-rise RC structure)

Buildings using three-dimensional shear wall (core wall) are being built more and more to remove pillars and beams from residential space of high-rise residential buildings. By using the ECC coupling beams excellent in tensile performance between these core walls, a new frame structure that absorbs earthquake energy is accomplished.





Super RC frame structure using ECC coupling beam

KAJIMA CORPORATION