

# Activities of Japan Prestressed Concrete Contractors Association

Les initiatives de l'Association japonaise de la construction en béton précontraint

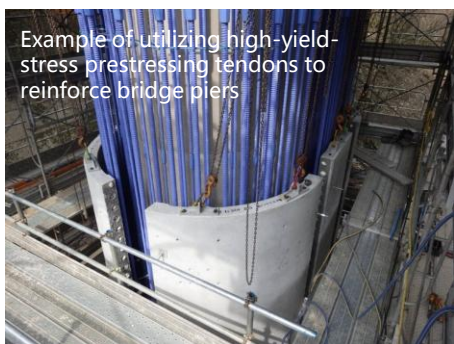


## Enhancing resilience through preparedness for natural disasters using prestressed concrete technology

### Preparedness for major earthquakes (seismic retrofitting)

In order to create and maintain a safe society, existing structures will be seismically retrofitted using prestressed concrete technology.

In the event of an earthquake, prestressed concrete engineers will take part in post-disaster restoration activities.



Seismic retrofit of bridge piers (prestressed concrete jacketing)



Abutment turned into a rigid reinforced concrete structure



Restoration of a bridge damaged by a major earthquake



Adding seismic strengthening devices to an existing prestressed concrete bridge



Before seismic retrofit

Hinge



After seismic retrofit

Modifying a hinged rigid-frame bridge into a continuous structure and constructing an additional arch

Filling of hollow piers

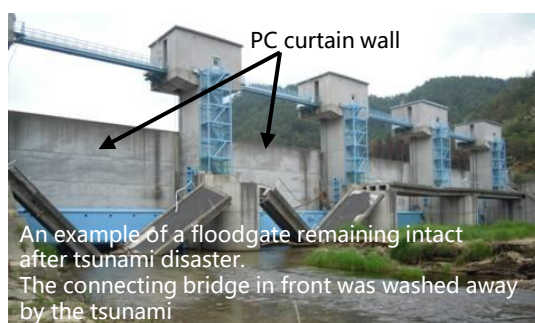
Adding a support point using an additional arch

### Preparedness for tsunamis

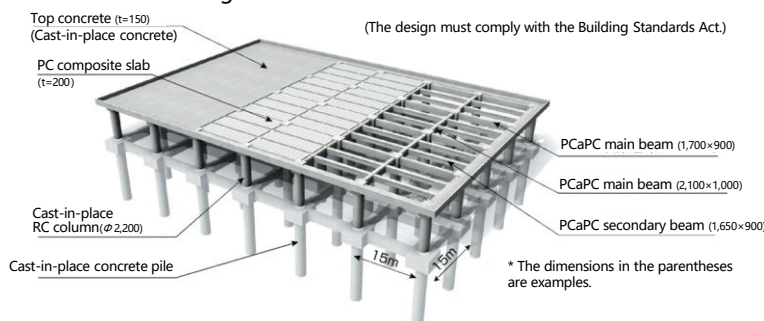
To realize a safe and secure society, promote the development of artificial ground and tsunami evacuation facilities using PCaPC technology, as well as the construction of tsunami floodgate systems using PC curtain walls.



Artificial ground constructed offshore



Tsunami floodgate curtain wall



Structural diagram of artificial ground utilizing PCaPC  
\* The use of precast members accelerates relocation to higher ground, as well.



Tsunami evacuation towers utilizing PCaPC technology

(Note) PC : prestressed concrete , PCa : precast , RC : reinforced concrete

