



■ Bridges

**Reference Details:**

**Owner** Japan Highway  
Public  
Corporation /Japan +++

**Designer**  
Sumitomo/Nippon  
P.S.Joint Venture +++

**Structural Design**  
Gifu /Japan

**DSI Services** Supply  
and installation of 73  
tons DYWIDAG Strand  
Tendons type MC 19-  
0.6" and 20 tons  
THREADBAR®  
Tendons 32 mm dia..



## Improved seismic capacity for a smoother ride

### Nakanishi Viaduct, Gifu, Japan

The Nakanishi Viaduct consists of two consecutive bridges which have been designed as multispan, rigid frames. The advantages of a multispan frame bridge are smoother ride and improved seismic behavior.

ends of the superstructure were horizontally shifted with hydraulic jacks. Dampers were installed between the bridges to accept any possible relative movement against each other in a seismic event.

The superstructures were post-tensioned by external DYWIDAG MC 19-0.6" Strand Tendons. The piers were designed as two parallel walls each employing single bar tendons for post-tensioning.

In order to compensate for creep and shrinkage of the concrete in the bearings and girders, both