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# Ibigawa Bridge

A huge extradosed bridge of hybrid steel and concrete segment construction.

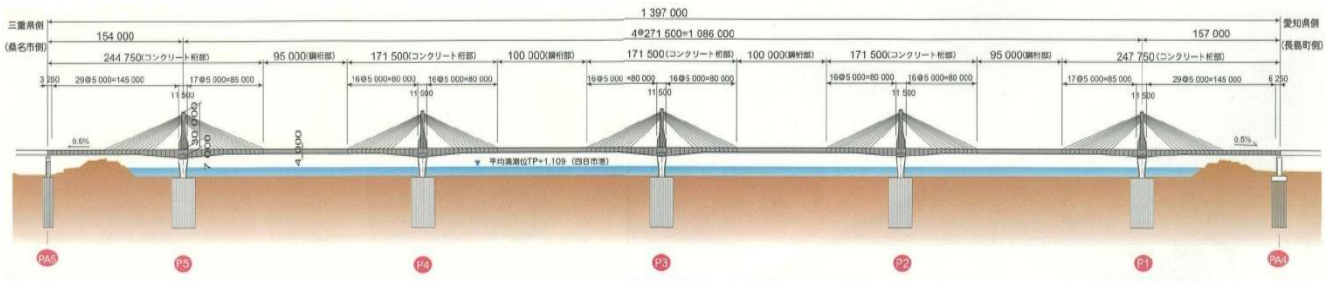


Client	: Japan Highway Public Corporation
Project Site	: Kuwana City, Mie Prefecture
Completion Year	: 2001
Bridge Type	: 1397m
Construction Structure	: 6 Span Continuous Extradosed Box Girder Bridge of Integrated PC and Steel Structure
Width	: 33m
Span Length	: 271.5m (Steel girder section consists of 100m and 95m)
Main Tower Length	: 30m from the bridge deck (Number of stay cables 12)
Construction Method	: Cantilever Erection Method Through Erection Noses
Manufacturing Method	: Short Line Match Cast Method
Main Girder Cross Section	: Tri Chambered Box Girder (With Upper Slab Rib Attached)
Award	: Japan Society of Civil Engineers Tanaka Award 2001 Japan Prestressed Concrete Institute Award for Work 2001
References	: Bridge and Foundation Engineering January 2001 Issue and Journal of Prestressed Concrete No.2 1999

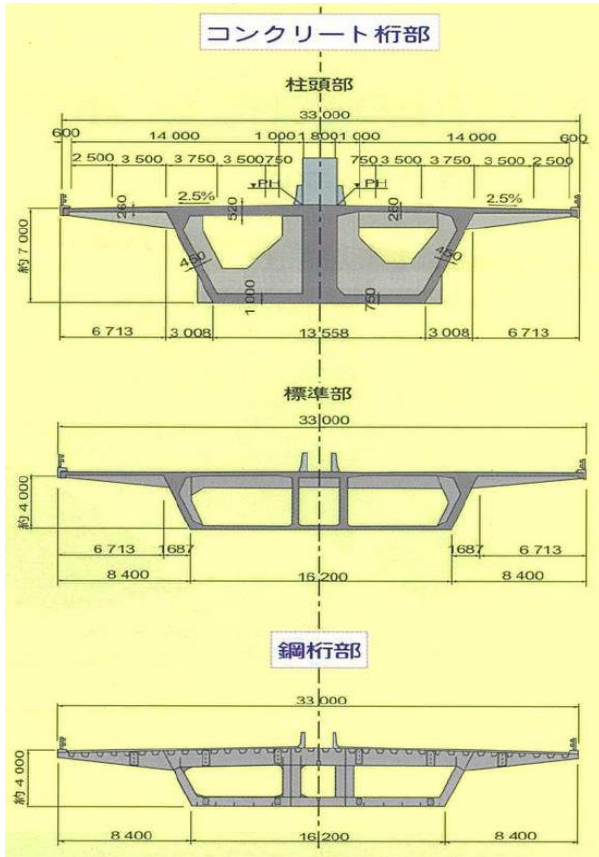
The above bridge construction method is identical to the adjacent Kisogawa Bridge and was constructed simultaneously. The segments were transported through a pontoon bridge located at the mouth of the Ibi and Kiso rivers. Both Ibigawa Bridge and Kisogawa Bridge had the same production site and equipment for the segment. It has a high damping rubber with two bearing lines installed on top of the piers. Since the span was substantial, the amount of deformation was considerably noticeable, causing the work execution extremely challenging due to immediate deformation during stock duration. The central steel girder was carried through a pontoon and lifted up by attaching the connector to the tip of the concrete girder integrated with the steel girder. Stay cables for the main tower is a tension-type and was affixed by using steel shelled cells. The tensioning for the stay cables was applied from the main girder side. Incidentally, the main tower was designed to resemble the sails of a yacht, and the concrete section was constructed after the tensioning of the stay cables.

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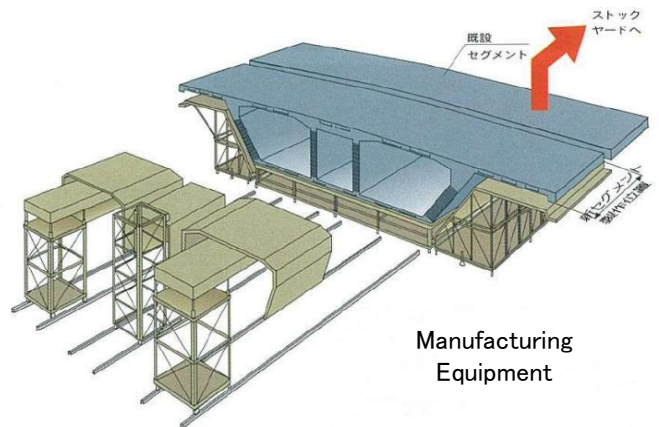
Side View



Cross Section View



Segment Manufacturing Yard



Manufacturing Equipment



Erection Equipment for Segments



Completion of the Segment Installation