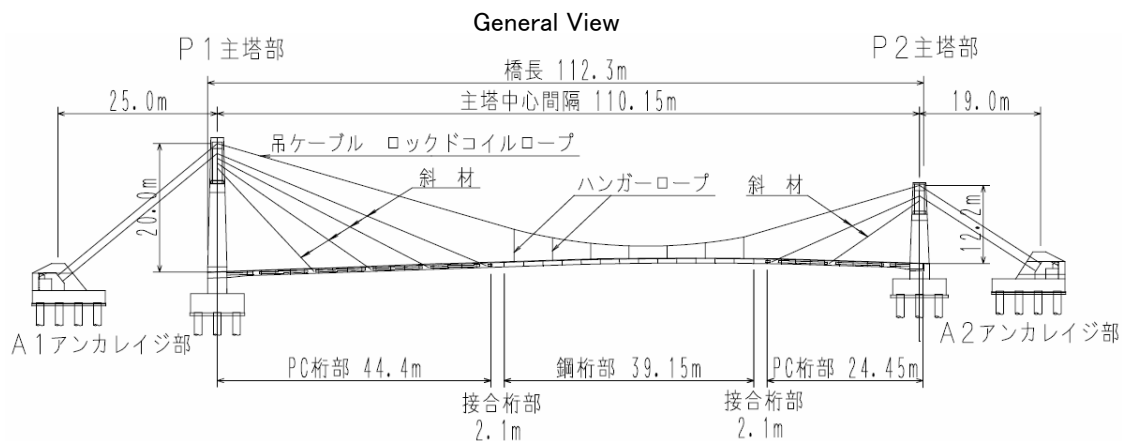

Nagisa Bridge

A Hybrid PC and cable tensioned bridge that have become the landmark of Ajigasawa town.

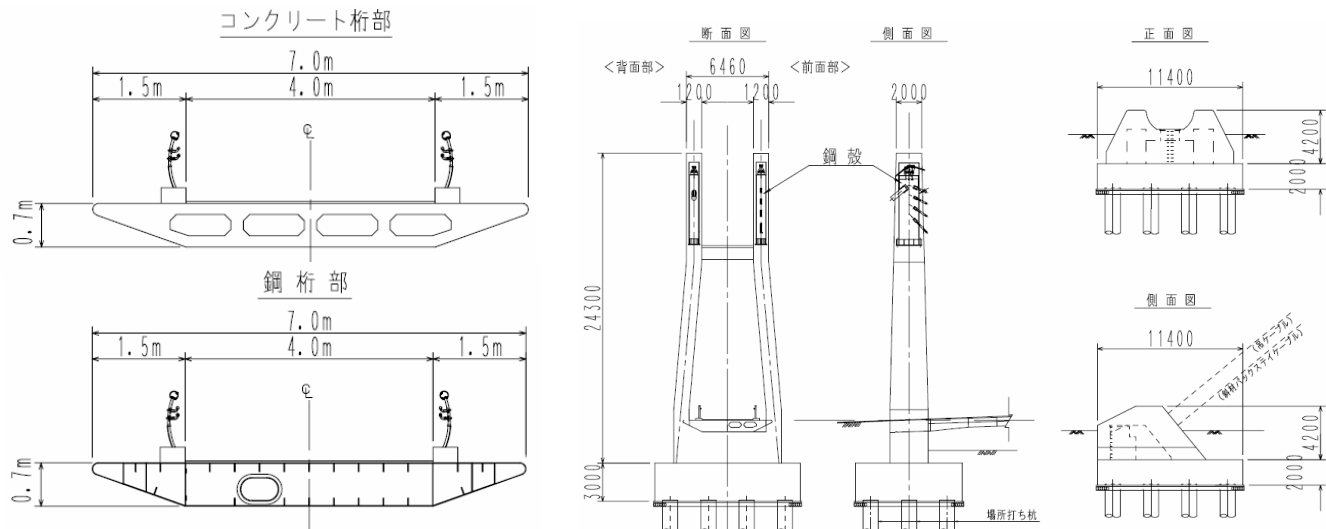


Client	: Aomori Prefecture
Project Site	: Ajigasawa Town, Aomori Prefecture
Completion Year	: 2002
Bridge Length	: 112.3m
Tower Distance (In between)	: 110.15m
Bridge Type	: Single Span Hybrid PC Cable Stayed Bridge
Width	: 7m
Steel Girder Length	: 39.15m (Excluding the joint section of the girder 2x2.1m))
Main Girder Cross Section	: (Concrete Section: Four Chambered Box Girder Casted With Styrofoam Type Mould) (Steel Girder Section: Box Girder)
Girder Joint	: Front and rear surface plate method
Construction Method	: Precast segment erected by crane/both end section around the pivot area was casted on site
Manufacturing Method	: Long Line Match Cast Method
Lifting Cable	: Locked Coil Rope (Diameter 80mm)
Diagonal Support Material	: SEEE F-PH
Award	: Japan Prestressed Concrete Institute Award for Work 2002
References	: Bridge and Foundation Engineering July 2003 Issue and Journal of Prestressed Concrete No.3 2003

The bridge construction above is extremely rare for a pedestrian bridge. The main girder is a hybrid girder type of concrete and steel. The suspension material is a cable-stayed bridge on both abutment sides, and the centre of the span is suspended through a cable rope like a suspension bridge. Although it is a single span, it is structurally asymmetrical, with four diagonal section on the A1 abutment side and two diagonal section on the A2 side. Along with this, the height of the tower is also different. As for the bearing type used, the A1 side, which has a large axial force due to the diagonal material, is fixed, while the A2 side bearing is movable. The A2 side was fixed at the time of construction. Steel shell cells are used to affix the diagonal support from the main tower to the hanging cable. The lifting was carried out from the land side with a large crawler crane.



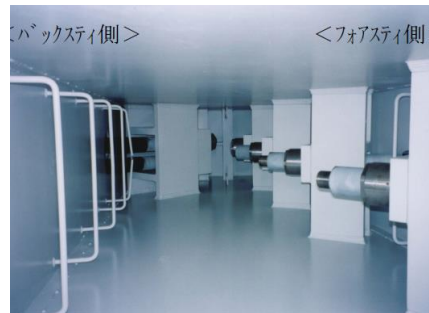
Cross Section View of The Main Girder



Concrete Girder Manufacturing
(Long Line Match Cast Method)



Steel Girder Manufacturing



Cable Stay Attached to The Main
Tower Inner Structure



Concrete Girder Installation



Steel Girder Installation

