



■ Bridges



Reference Details:

Owner Aomori Prefecture, Aomori, Japan, JR East Japan Corp., Tokyo, Japan
+++ Main Contractor Right river bank: Joint Venture consisting of Kajima Corp., Hozumi Co. and Tsujimoto Co., Japan; Left river bank: Joint Venture consisting of Kajima Corp. and Tekken Co., Japan
+++ Consulting Sanyu Consultants, Tokyo, Japan

DSI Unit SUMITOMO (SEI) STEEL WIRE CORP., Tokyo, Japan
DSI Services Supply of multi-epoxy tendons, anchorages type MC 19-0.6" and 27-0.6" and DYWIDAG Bars Ø 32 mm.



World Record for Extradosed Bridge with Extradosed Cables in Japan

Sannohe-Boukyo Bridge

The Sannohe-Bokyo bridge is a three-span, extradosed prestressed concrete bridge with a total length of 400 m. It runs from east to west, connecting the Nanbu-cho, Sannohe-cho, and Takko-machi, Aomori Prefecture's agricultural development areas.

This bridge was designed as an extradosed continuous girder, since this construction method was deemed best in view of the geographical conditions that existed at the site. The Mabuchi River that is to be crossed runs through very uneven territory there. Due to its classification as a category A river, it must be particularly protected.

Category A means that that river is important for the national economy and the welfare of the population. To protect the river and at the same time cross the Aomori line (former JR Tohoku line) and the Sannohe town road, a main span length of 200 m was required.

At the time of its completion in early 2005, this structure held the world record for an extradosed bridge with a main girder constructed solely of prestressed concrete. The Sannohe-Bokyo bridge is the first extradosed bridge in Japan to use shop fabricated multi-epoxy tendons.

These tendons were made of prestressing steel strands coated with a fine-grain epoxy resin. This way, the service life was increased and the construction period considerably reduced. The shop fabricated multi-epoxy tendons were transported to the site where they were installed in the structure. Large bridge sections were first completely assembled on the ground and then lifted into their final position by means of a crane and an electric winch and installed.