

Strengthening with Prestressed CFRP Strips of Box Girders on the Chofu Bridge, Japan

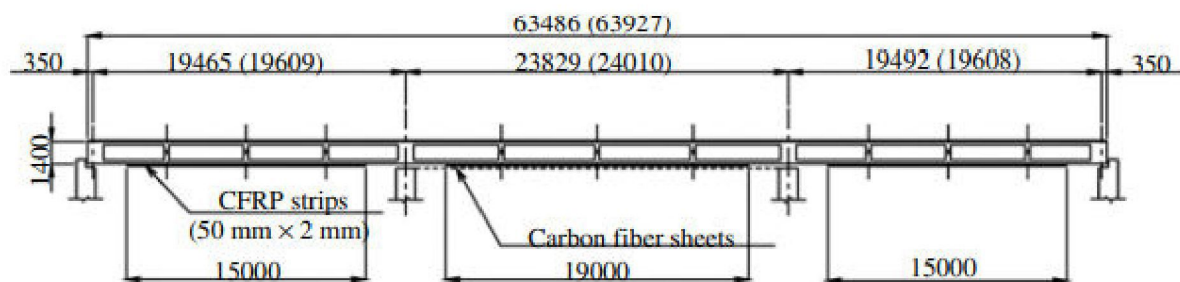
Location: located in the western part of Tokyo, Japan

General assessment: Chofu Bridge of Chuo Highway is a three-span continuous reinforced concrete (RC) box girder bridge that was constructed 28 years ago.

Problem: In the Chofu Bridge, which is an RC box girder bridge, many cracks had formed and water leakage from the cracks was observed at several locations. The deflection of the main girders caused by increase in heavy traffic and decrease in stiffness of the bridge.

Solution: Steel plate bonding method and carbon fibre sheet bonding method were considered for this bridge. The CFRP strip is 2 mm thick and 50 mm wide. Each end of the strip is inserted into an anchoring device that is made of steel. Both ends are embedded and anchored by an expansive plate.

Ref: Case Studies of Rehabilitation, Repair, Retrofitting, and Strengthening of Structures, IABSE, AIPC, IVBH



Before



After