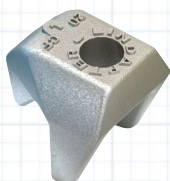# Müngstener Bridge

Lindapter's Type CF Girder Clamps provided a non-intrusive, safe, and effective solution for installing safety rope brackets on Germany's highest railway bridge.

Project Background

Location: Solingen, Germany
Contractor: Insight.out GmbH
Client: Deepwood GmbH & Deutsche Bahn
**Product:** Type CF

Müngstener Brücke, Germany's highest railway bridge at 107 metres, spans the river Wupper and is celebrated for its scenic views and architectural significance. Completed in 1897, the arched, riveted steel bridge is a national monument that has undergone several restorations. As part of its latest redevelopment, a new skywalk was planned to enhance its attraction as a tourist destination. The challenge was to install brackets for safety ropes for climbers on the old, riveted beams while preserving the bridge's structural and historical integrity.

Client Requirement

The project required a solution to securely attach safety rope brackets to the bridge's riveted girders without drilling or welding, as structural intervention in the bridge was not permitted. The solution had to accommodate the unique geometry of the riveted beams, which in some places consisted of three to four overlapping sheets of steel. Safety was paramount, as the brackets would support climbers navigating the skywalk. Additionally, the solution needed to meet strict regulations set by Deutsche Bahn while ensuring the bridge's historical elements were preserved.
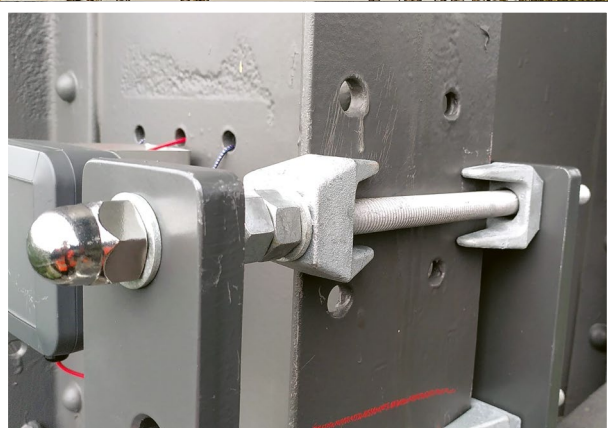
Type CF clamps provided a reliable, adjustable attachment point for the safety rope brackets
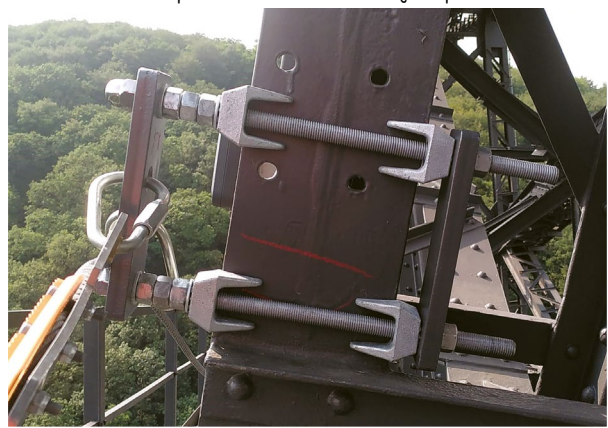
Müngstener Bridge

Design Solution

Lindapter's Type CF Girder Clamps, size M20, were selected as the ideal solution for this project. These clamps were specifically chosen for their ability to secure connections without causing damage to the existing steel structure.

Designed to accommodate the overlapping sheets of steel on the riveted beams, the CF clamps provided a reliable and adjustable attachment point for the safety rope brackets.

Size M20 was chosen to meet the high safety requirements necessary for securing personnel on the skywalk. This non-intrusive solution eliminated the need for drilling or welding, preserving the integrity of the historical monument while ensuring compliance with modern safety standards.
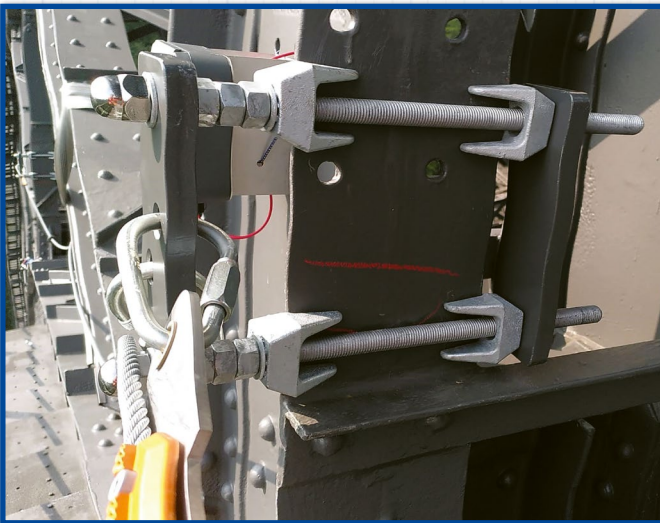
Installation

The Type CF Girder Clamps were installed along the existing maintenance track on the bridge, which was already secured by a guide rail. The installation process was efficient and straightforward, utilising the clamps' adjustable design to attach securely to the riveted beams.

Thanks to the adjustability of the CF clamps, the team could quickly and safely position the brackets without the need for heavy equipment or structural modifications. The entire installation process ensured minimal disruption to the bridge and adhered to strict safety protocols, with all work completed efficiently and on schedule.

Result

The project successfully delivered a safe and robust solution for the Müngstener Brücke skywalk without compromising the bridge's historical integrity. The CF Girder Clamps provided secure attachment points for the safety rope brackets while preserving the riveted beams and requiring no structural alterations.

By avoiding drilling or welding, the project respected the monument's heritage while meeting the stringent safety standards set by Deutsche Bahn. The completed skywalk is now a safe addition to the bridge showcasing the blend of innovative engineering with historic preservation.

Benefits

✔ **Preservation of Historical Integrity:** Non-intrusive solution with no drilling or welding required.
✔ **High Safety Standards:** M20 CF clamps ensured secure attachment for climbers.
✔ **Flexibility:** Adjustable design accommodated overlapping steel sheets.
✔ **Ease of Installation:** Efficient process without heavy equipment or structural interventions.
✔ **Compliance:** Fully met Deutsche Bahn's strict safety and preservation requirements.
✔ **Enhanced Attraction:** Added a safe, modern skywalk to the historic bridge.

Click here to watch the installation video >>>