Bavaria Towers

Lindapter Girder Clamps provided a solution for securing eaves to the roof of two towers.

Project Background

Location: Munich, Germany
Market: Steel Building Construction
Product: Type AAF Girder Clamps
Quantity: 1,600
Contractor: MERO-TSK International GmbH & Co. KG

The Bavarian Towers are part of a group of buildings designed by Spanish architects Nieto Sobejano Arquitectos and are one of the few high-rise developments to be built in Munich in recent years. The €380 million project in the Bogenhausen district includes three office blocks and one hotel building ranging from 46 to 84 metres tall.

Client Requirement

The slanted concrete roof was constructed on top of concrete supports and connected with struts which form a complex grid that helps reinforce the roof. The service floor located in the roof space housed the climate control and ventilation equipment. A method of connecting steel beams to the concrete roof trusses without drilling was required in order to construct the eaves to cover and protect the HVAC systems.

Steel beams were connected to the concrete trusses

Type AAF helped avoid drilling into the concrete

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Design Solution

Lindapter Type AAF Girder Clamps with M16 bolts were specified to connect 174 steel beams to the concrete roof trusses with a special bracket arrangement that avoided the need to drill into the concrete.

The 4-bolt combined loading connection that was designed achieved the required high slipand tensile resistance. A hot dip galvanised (HDG) finish was also specified for the Girder Clamps to provide a high level of corrosion protection.

The decision to use Type AAFs was influenced by independent technical accreditations, which include the CE mark (ETA-13/0300), TÜV and Lloyd's Register approvals.

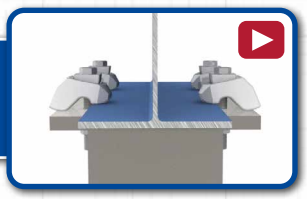
Installation

The main contractor used a total of 1,600 size M16 Type AAF Girder Clamps to connect the steel beams and support bracketry to the concrete trusses.

Installation was quick and easy as the steel beams were quickly aligned by sliding the beams into the correct position on each support bracket before tightening the clamp assembly.

Once tightened to recommended torque the steel beams and support brackets were securely connected to the concrete beams. To complete the installation translucent roof panels were attached to the steel framework.

Click here to watch the installation video >>>



Result

Type AAF Girder Clamps provided a drilling and weld free connection onsite that was quick and easy to install.

The clamps are fully adjustable which gave the contractor the ability during installation to manoeuvre the brackets into their final positions before fully tightening them.

Installation was quick and easy to complete

Key Benefits

- ✔ High slip resistance for combined loads
- ✔ Hot Dip Galvanised finish provides a cost-effective and low maintenance solution
- ✔ No drilling or welding required
- ✔ Fully adjustable on-site for easy installation

CE TÜV NORD Baumuster geprüft ICC ES ESR-3976

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