Public School 24 Expansion

Lindapter Girder Clamps provided a solution for the installation of a rooftop playground enclosure.

Project Background

Location: Queens, New York, USA
Product: Type F3 Flange Clamp
Client: New York City School Construction Authority
Specifier: Ysrael A Seinuk P.C.
Steel Contractor: ALC Steel

Andrew Jackson Elementary School (Public School 24) was built in 1931, with two additional wings built in late 1950s and two transportable classroom units installed 20 years ago to meet demand for pupil places. In recent years the classrooms had become overcrowded due to rapid population growth. Plans were proposed for a major renovation and expansion of the school which would increase capacity from 750 to 1442 students.

Client Requirement

The expansion project included a new four storey, state-of-the-art facility incorporating 28 new classrooms, a dance studio, science and technology labs, a music room, an art studio and a rooftop playground. It was here on the rooftop where an enclosure was required to provide permanent protection from falls or objects exiting the playground. A suitable method of connecting the wire mesh panels to the steel frame of the enclosure was required and consequently the structural engineer specified Lindapter clamps.

The completed steel framed rooftop enclosure

Type F3 flange clamp connect the mesh panels

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Design Solution

Following design team meetings the Lindapter Type F3 high strength flange clamp was selected as the most appropriate product for the project.

The contractor also determined that clamping the mesh panels to the steel frame would be quicker, safer and more cost effective than welding.

The Type F3 clamps would provide the necessary clamping force to secure the enclosure and the hot dip galvanised (HDG) finish would provide a high level of corrosion protection.

Installation

Steel columns and beams were used to construct the steel frame on top of the four storey building. Pre-fabricated wire safety mesh panels with brackets attached were then installed between each column and across the beams to create an enclosure around the playground.

Each wire mesh panel was connected to the steel frame using the Type F3 to clamp the brackets against the column and beam flanges. Installation of almost 700 clamps was quick and easy as only simple hand tools were required to tighten the nut and bolt to the recommended torque.

Result

Type F3 flange clamps provided the contractor with 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 wire mesh panels into their final positions before fully tightening them.

The cost effective solution delivered a successful installation of the enclosure which allows students to enjoy the playground safely.

Artists impression of the four storey extension

Key Benefits

- ✔ Fully adjustable onsite for easy installation
- ✔ No site drilling or welding
- ✔ Hot Dipped Galvanised finish offers a cost effective and low maintenance solution

FM APPROVED *(M10 and above)*

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