

Project: Benteler Steel/Tube Administration and Training Building

Location: Shreveport, LA

Architect: SSOE, Middough and Siemens

Glazing Contractor: Binswanger Glass Company

Product: SteelBuilt Curtainwall Infinity™ System



In 2013, Benteler Steel/Tube began construction on its first manufacturing plant in the United States. The German steel company hired SSOE, in conjunction with Middough and Siemens, to design the 360-acre (145-hectare) facility in Shreveport, Louisiana. The finished site contains a complete manufacturing facility that employs hundreds of workers and is capable of producing up to 320,000 tons (290,299 metric tons) of steel tubes each year.

One of the project's key features is the Benteler Steel/Tube Administration and Training Building, which acts as the headquarters for the entire facility. It welcomes visitors into the complex through a bright, open and highly visible front entryway.



To create the landmark entry, one key consideration during the design phase was selecting a slender curtain wall system capable of supporting expansive free spans of glazing. This would help ensure the light-filled, greeting area did not compromise the building's modern appearance. The ideal system also needed to be adaptable enough to fill the large, angular entry space created by the building's pitched roofline. The design team found their solution with the SteelBuilt Curtainwall Infinity™ System from Technical Glass Products (TGP).

The design-forward system is approximately three times stronger than traditional aluminum curtain wall systems and can use as a back mullion nearly any type of custom steel member, including stainless steel, box, I-beams and T-shapes. Its exceptional strength and versatility allow for greater free spans, larger areas of glass and reduced frame dimensions. In the Benteler Steel/Tube Administration and Training Building, each of these benefits was necessary for creating a clean, open entry portal that could flood the interior with daylight.

The 2,166-square foot (201 m²) SteelBuilt Curtainwall Infinity System features expansive free spans, ranging from 23'-8" (7.21 m) to 26'-7" (8.10 m), glazed with 1" (25.4 mm) insulated glass units (IGU). The large glass spans help effectively transfer daylight throughout the building's entryway. They also help reduce the quantity of vertical and horizontal mullions to preserve the manufacturing plant's modern appearance.

The crisp, steel frame profiles further complement the open entry, helping shift the visual focus off the frames and onto the glazing. Frames with narrower dimensions are less noticeable to building occupants, and are able to help improve occupant views between spaces.

The flexibility to use steel frames in various complex shapes also made it possible for the design team to meet the entry's pitched roofline without detracting from the building's sleek appearance. The SteelBuilt Curtainwall Infinity System wraps around the corner of the front elevation and right return, following the challenging angled space created by the sloped roof. The corner mullion was a 2.375" (60 mm) square tube with 0.236" (6 mm) walls. It was able to adequately support the gravity loads the horizontals introduced at the corner. At the same time, the horizontal mullions allowed the corner to be smaller than typical mullions to adequately support the lateral wind loads at the corner.

To learn more about the SteelBuilt Curtainwall Infinity System, visit tgpamerica.com.