Customer Case Study

LeJeune Steel Co. / Wisconsin Structural Steel: Textbook Bridge Fabrication

EXECUTIVE SUMMARY

CUSTOMER NAME: LeJeune Steel Co. / Wisconsin Structural Steel

INDUSTRY: Heavy structural steel for bridges and buildings

LOCATION: Minneapolis, Minnesota, USA

MACHINES INSTALLED: The BDL-1250/9B drill line, DGP-1270 band saw, ABCM-1250 structural coping machine, and the FPDB plate processor

ANNUAL TONNAGE: 40,000 tons annually

John Peterson, Detail Manager (left) and Brad Fox, Plant Manager (right) use their Peddinghaus equipment for a wide array of bridge, and heavy structural fabrication projects.

LeJeune Steel Bridge Receives High Honors at the University of Minnesota

In today’s marketplace the need to diversify is more apparent than ever. It’s no secret that office building, residential, and general commercial projects remain sluggish in the USA. For some this may be a cause for concern, but for others this is a sign to explore more vibrant markets within the steel fabrication marketplace.

According to Reuters news agency, as of March of 2011, 69,000 bridges in the USA were in the need of maintenance or replacement. Exhibiting the tools and the talent to go where some other fabricators do not, LeJeune Steel Co. of Minneapolis, MN specializes in these projects using their Peddinghaus equipment. Together with their heavy fabrication division, Wisconsin Structural Steel, LeJeune is a prime example of what modern technology and traditional craftsmanship can do in today’s economy.

The Project - A Golden Opportunity at the University of Minnesota:

The University of Minnesota’s student population of 52,000 is only rivaled by the throngs of Golden Gopher sports fans who frequent the campus throughout the academic year.
Responding to the need for quality public transportation, the University of Minnesota called upon local agencies to introduce a new light rail train system. In order to traverse the mighty Mississippi River, this system is being incorporated into one of the university’s most recognizable landmarks - the Washington Avenue Bridge.

To enable this nearly 50 year old bridge to support the 106,000 lb / 48,000 kg trains that the light rail system will employ, LeJeune Steel Company accepted the challenge to modify the bridge’s fracture critical design. The bridge enhancement spans just less than one quarter of a mile (1,130 ft / 345 meters), and demands 240 heavy steel sections at 25’ / 8 meter and 50’ / 15 meter long increments to properly support the weight of the new train system.

The Fabrication - Wisconsin Structural Steel Steps Up to the Plate:
Roughly 2 hours outside of Minneapolis, in the forests of Barronett, WI Brad Fox, Plant Manager of Wisconsin Structural Steel, and his team operate one of the most sophisticated fabrication shops in the upper Midwest. With a resume that includes the Minnesota Twins Ballpark, and the Golden Gophers Football Stadium it’s easy to see how much Wisconsin Structural Steel contributes to LeJeune’s 40,000 ton overall annual production.

To process the heavy sections for this bridge, Brad and his team rely on their Peddinghaus equipment. Each of the 16,000 lb / 7,250 kg box sections for the bridge were processed on the powerful BDL-1250/9B drill line. The BDL-1250/9B drill line, in tandem with DGP-1270 automatic band saw prove to be a powerful combination when accuracy is a major concern.

“Our Peddinghaus equipment has been very accurate. The box sections for the bridge in Minnesota are expensive to produce, so any error would cause a major cost issue. So far the machine has consistently drilled well within tolerances of plus or minus 1/32” (1 mm).” stated Brad, “here at Wisconsin Structural Steel we like to do things right the first time, and we are able to do that with the Peddinghaus machines that we have.”

A critical part of the bridge fabrication process, the FPDB plate processor from Peddinghaus proves to be a powerful tool for parts requiring high accuracy, and rapid production times. High speed carbide drilling combined with the carbide marking capabilities of this workhorse provide superior production, without sacrificing quality or material
handling efficiencies.

“With our FPDB we are able to drill 1-1/16” / 27 mm holes through 1-1/2” / 38 mm thick plate in only twelve seconds. This helps us achieve our 70 ton per day production capacity.” Brad had stated. “Our latest addition to our fab shop was the coping machine [ABCM-1250]. The day we had installed that machine we had instantly shaved 2 man hours off each fabricated ton. It was a great addition to our facility.”

**From Fabrication to Fit-up - LeJeune’s Minneapolis Plant Puts Parts to the Test:**
LeJeune’s Minneapolis plant is key to final fit-up and quality control. The large box sections processed on the BDL-1250/9B drill line and the plate components processed using the FPDB are assembled on the floor in Minneapolis to receive final approval before being sent into the field.

“You will see multiple bridges at any given point in time at our Minneapolis plant. We currently have 5 bridges in the shop including the Washington Avenue Bridge. Our most common bridges are rail bridges but we also have capacity to capture a variety of other projects.” stated Matt Rovnak, Business Manager, “The box sections processed at our Wisconsin plant on the Peddinghaus drill are proven for accuracy right here. So far every part from our Peddinghaus machines has been right on the money!”

**The Final Installation - Improving the Transportation of Twin City Locals for Years to Come:**
Well on track to meet expected completion in November of 2012 the new Washington Avenue train line will certainly benefit future generations of Golden Gopher fans, and students alike. Using their Peddinghaus equipment LeJeune and Wisconsin Structural Steel continue to leave their mark in the heartland of America, one bridge project at a time.

For more information on LeJeune Steel Company please visit www.lejeunesteel.com
FOR MORE INFORMATION

To learn more about Peddinghaus Corporation visit:
www.peddinghaus.com

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