Heavy steel. Built for your industry.

From precision-cut plate to finished assemblies. Manufacturing in Mexico for OEM customers in the United States and Mexico.

2,400 tons	30 kW	150+	AWS CWI
53 ft forming length	16 m laser bed	Welding stations	In-house inspection

Priority applications

Heavy truck frame rails and heavy subassemblies. Transformer tanks, large freight-rail components, and fabricated steel structures for data centers.

Cutting and forming

5 lasers, up to 30 kW with a 16 m bed.
5 plasma cutting beds, up to 25 m.
8 press brakes, from 200 to 2,400 tons.

Welding and machining

150+ welding stations, including robotic welding capabilities. In-house tooling and fixtures.
Haas CNC milling and turning: GR-510, VF-7, TM-2P, ST-35L and TL-2.

Materials and finishing

Direct steel purchases from SSAB, ArcelorMittal and Ternium. Blasting and painting booths.
High-strength frame rails up to 140 ksi yield strength in partnership with SSAB, subject to project-specific engineering analysis.

Inspection and production control

In-house AWS CWI and CWE.
Creaform portable CMM and 3D scanning.
RT, UT, MT and PT inspections to project requirements; tank pressure testing when required.
MIETrak ERP for production coordination.

Manufacturing footprint

8.65-acre site with five main production buildings totaling 8,100 m² (approximately 87,200 ft²).
Cranes up to 20 tons.
Founded in 2010; industrial construction roots dating to 2003.

Serving U.S. customers

Most production goes to the United States.
Extensive experience in logistics and Mexico-U.S. border crossings.

Discuss your manufacturing program

Send drawings, materials, quantities and delivery requirements. RFQ response target: three days, depending on size and complexity.
contact@ionsa.com.mx | ionsamx.com/#contact

U.S. heavy truck OEM | Customer name withheld

Bolted frame rails

Controlling weld deformation in a long-rail manufacturing program.



Strenx 110 XF	5-8 m	2,600 units
3/8 in thickness	Rail length	Estimated annual usage

Ongoing production since 2025

IONSA manufactures bolted frame rails for a U.S. heavy truck OEM. The program has been active since 2025, with estimated annual usage of 2,600 units.

From coil to fabricated rail

The process runs from coils to plates, followed by laser cutting of profiles and holes, bending, and welding subassemblies to the rail. Fixtures are designed and fabricated in-house to support the assembly process.

Challenge and solution

Weld deformation was the principal manufacturing challenge. IONSA resolved it using pulsed-arc welding, specific welding parameters and a defined welding sequence.

Program facts supplied by IONSA. Annual usage is an estimate, not a claim of units delivered. Customer identity omitted.

U.S. energy OEM | Customer name withheld

Power transformer tanks

Engineering development, dimensional control and large-scale painting.

6 x 5 x 2.5 m	15-20 t	~50 units
Approximate dimensions	Tank, cover and loose items	Supplied per year

Ongoing supply since 2025

IONSA supplies power transformer (PT) tanks to a U.S. energy OEM. The program has been active since 2025, with approximately 50 units supplied annually. Materials include ASTM A572 Grade 50 and stainless steel.

Challenge: engineering development and painting

The program required engineering development and a painting process suited to large tank assemblies. IONSA addressed these challenges using engineering software and its large paint booth, with coating requirements based on IEEE C57.12.28.

Dimensional and weld inspection

Dimensional verification uses Creaform CMM and 3D scanning equipment. In-house AWS CWI expertise supports weld inspection, with RT, UT, MT and PT (liquid penetrant testing) used according to project requirements. Pressure testing is performed when required.

Delivery to U.S. customers

The program is supported by IONSA's experience in logistics and Mexico-U.S. border crossings. Most of the company's production is supplied to the United States.

Program result

An ongoing supply program combining engineering development, fabrication, dimensional and weld inspection, and painting for large transformer tanks.

Power transformer tank inspection



Creaform dimensional inspection of a power transformer tank.
Reference targets support measurement alignment.
Tank, cover and loose items: approximately 15-20 metric tons.

Request a quote

Send drawings, materials, quantities and delivery requirements.

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