



FABRICATED STEEL STRUCTURES AND BRIDGES

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About us

Indiana was incorporated in the year 1970 as a grating fabricator and is today recognized as a diversified group. Indiana's business verticals are fabricated structural steel, steel bridges, gratings, handrails, cable management systems and bulk material management systems.

Indiana serves its worldwide customers through its state-of-the-art fabrication facilities that implement world-class processes and practices.

Indiana is a customer-centric group and has experience of decades working with leading owners, consultants and contractors worldwide.

Indiana exports to various parts of the world which include (but not limited to) the Middle East, South East Asia, the Americas, Australia and Europe.

Indiana has executed projects for various international companies (but not limited to) like Bechtel, Fluor, Saipem, CB&I, Petrofac, Technip, Foster & Wheeler, Tecnicas Reunidas, J Ray McDermott and NPCC. It has also executed projects for Indian companies such as NTPC, BHEL, Reliance, ONGC, L&T, Thermax, BGR Energy, Essar, Adani and TATA group.

Other Verticals

Gratings



- Mild Steel
- Stainless Steel
- Heavy Duty
- Stair Treads
- GRP/ FRP

Handrails



- Modular / Ball type handrails
- Custom Fabricated handrails

Cable management system



- Perforated trays (Embossed & Plain)
- Ladder trays
- Wire Mesh trays
- Cable Tray Support System
- Earthing Material
- Raceways and Trunkings

Bulk material handling system



- Turnkey Projects
- Belt Conveyors
- Bucket Elevators
- Related Equipment
- Accessories

Please contact us for detailed catalogue



Project Management

At Indiana, we give utmost importance to project management and understand that the same is vital to ensure the successful execution of the project.

We partner with our clients from the inception stage and understand the client's requirements in detail.

We work with the philosophy that their project is now our project. This holistic approach ensures understanding of how the product will be used and what they expect are from us.

If they have any queries, we will find the answers together. Based upon our vast experience, we often identify potential problems in advance and respond pro-actively.

We understand that each application requires a different approach and we understand client's priorities. Based upon client's needs, we can provide them with the optimal solution. We not only offer competitive prices but we also share our domain expertise in view of developing enduring business relationships



FABRICATED STEEL STRUCTURES

Annual Fabrication Capacity
36000+

Metric Tonnes Per Annum

Fabricated Steel Structures

Indiana continues to be an early mover into new verticals and anticipating the growing demand for shop fabricated structural steel over site fabricated structural steel, Indiana set up a state of the art fabrication facility in Jejuri, near Pune.

The advantages of shop fabrication over site fabrication are excellent welding

quality, dimensional accuracy, faster delivery in volumes and long lasting paint finish.

In our endeavor to establish a world class facility, Indiana has a series of machines imported from USA which include band saw machine, plate processors and beam drilling machines.

Indiana fabricates two types of structural steel sections

HOT-ROLLED

Products fabricated from rolled sections



BUILT-UP

Products fabricated from steel plates



Primary structures



► Built-up Sections

The Built-up beam section bay is equipped with submerged arc welding line with conveyor system for the fabrication of various types of beams such as "H", "T", "I", BOX and PLUS type.





The fabrication facility is installed with state-of-the-art material handling system with cross bay trolleys, using hydraulic and electrical operated roller conveyors and 18 EOT cranes with maximum SWL capacity of 25 tonnes to

handle the structural steel safely and efficiently.

The fabrication area of built-up sections is equipped with

- 14 - Saw welding machines
- 03 - CNC profile cutting machines
- 02 - I/ H beam assembly machines
- 01 - Flange straightening machine
- 01 - Face milling machine for columns

Product Range

 	H- Beam / I- Beam Flange Width - 200 - 900mm Web Height - 400 - 2000mm Length of beam - 4000 - 20000mm Flange thickness - 6 - 100mm Web thickness - 6 - 100mm	PLUS Beam Max Size of column - 900mm x 900mm Range of plates used - 16mm - 100mm Length of beam - 400mm - 2000mm	 
	Box Beam Width - 900mm x 900mm Length - up to 12000mm	T Beam Flange width -900mm Height - 400 - 2000mm Length - up to 1300mm	

* These are standard dimensions as per automatic machine line.
We can also fabricate built up sections as per client specifications

Secondary structures



► Hot-rolled Sections

Our shop for the hot rolled beams is well equipped with state of the art fully automatic CNC machines imported from Peddinghaus USA to process all types of materials sections like beams, plates, channels and angles.

The machines are connected with LAN through which nested numerical codes are being transferred from nesting software computers. Our planning team are provided with SDS Shop Data, PEDDIMAT, PEDDINEST, NIRVANA and COLUMBUS software which imports NC1, DSTV, DXF files which contains the

data/dimension extracted from CAD software such as and TEKLA (X-STEEL), SDS/2, STRUCAD and converts it into machine compatible nesting programs for the machines.

The entire operation of marking, cutting and drilling is CNC operated in accordance with nesting files without any manual interference in the operation cycle eliminating any room for manual error. Production efficiency and production quality both are controlled by the machines.

Fabrication Facilities



Best Equipped Structure Steel Fabrication Shop In India Today

Plot Nos.	D7	F5	Total
Covered Area	16,000 sqm 172,223 sqft	12,000 sqm 129,167 sqft	28,000 sqm 301,389 sqft
Open Area	8,000 sqm 86,111 sqft	13,000 sqm 139,931 sqft	21,000 sqm 226,042 sqft
Total Area	24000 sqm 258,334 sqft	25000 sqm 269,098 sqft	49,000 sqm 527,432 sqft

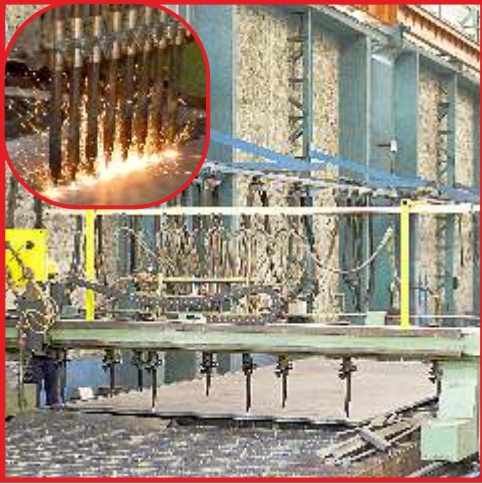
Total number of bays - 12
 Width of bays - 16m to 20m
 Length of bays - 100m to 150m
 Mock-up assembly area - 40m x 140m
 (m=metre)

Total number of electric overhead travelling cranes - 31
 Max. capacity of electric overhead travelling cranes - 40 Metric tons

Surface finish Facility:
 - Enclosed shot blasting facility
 - Enclosed painting facility
 - Hot dip galvanizing facility

CNC Machines

➤ CNC Oxy-fuel Cutting Machine



CNC Oxy-fuel cutting machine is a high-performance, heavy-duty CNC gantry machine with a rail span of 3,000mm to 8,500mm, the SUPRAREX SXE and forms the solid foundation for economical cutting with oxy fuel, with a VISION control system and COLUMBUS programming software for part nesting from ESAB. CNC Oxy-fuel cutting machine have 8 torches for straight cutting and one additional torch for profile cutting.

➤ Beam Assembly Machine

Automatic H beam assembly machine is used in a wide variety of H and I beam assembly, such as symmetry, asymmetry, variable cross-section assembly and spot-welding. Adopting twin-direction automatic centering unit, this assembly machine can automatically accomplish steel plate centered fixing with no need of manual adjustment.



➤ Submerged Arc Welding Machine



SAW Machine is mainly used for automatic submerged arc-welding for H and I profile sections. The automatic bidirectional guide-arc device adopts the straight line guide so it can achieve high accurate dynamic tracing for seam welding.

► CNC Band Saw Machine



The CNC band saw machine has the following unequalled advantages:

- Wide swivel range up to $\pm 30^\circ$ on both sides
- Material can be fed from either side of machine
- The material is always clamped at 90° to the blade
- Almost no wastage
- Using accumeasure equipment, it measures required beam length for cutting

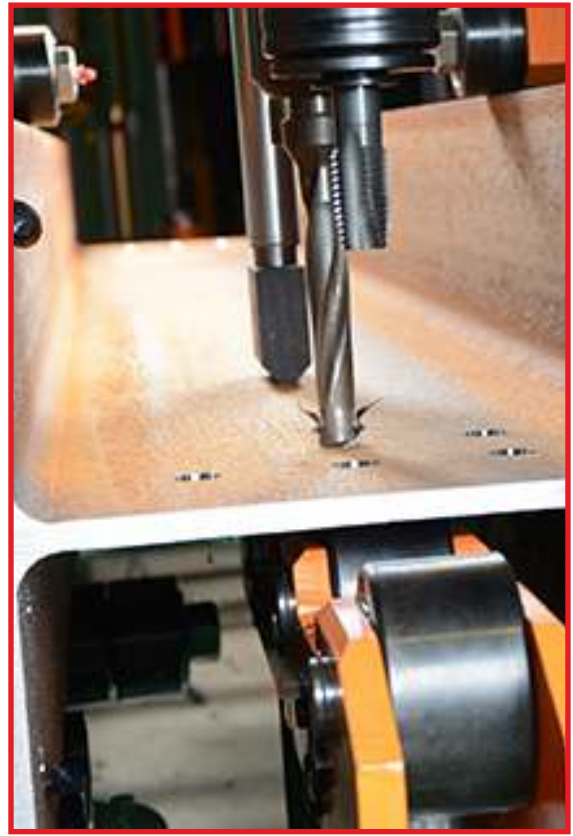
► CNC Beam Drill Line



The BDL-1250/9D Drill Line offers powerful spindle capabilities. Combining sophisticated Siemens electronics, heavy duty carbide drilling and superior feedback the BDL-1250/9D drill spindle is extremely versatile and efficient.

A three spindle drilling unit in each drilling axis eliminates the need to change tooling in programs with up to three hole diameters. It has high speed drilling of up to 1800 RPM and feed rates of nearly 686mm per minute.

➤ CNC Beam Drill Line



➤ High Speed Flat Drill and Burn (HSFDB)



Applying innovative cutting techniques, the high speed flat drill and burn machine can mark, drill and cut using dual cutting technology of plasma and oxy-fuel with a 8 automatic tool changer. It has a high speed drilling capacity using carbide drill tips with hole to hole accuracy of 0.1mm. Minimum plate thickness of 5mm up to 75mm can be processed with plate width of 2500mm and length up to 6300mm.

Using Edge Start Cutting technology, parts are processed from the edge of material; eliminating outside remnant

or skeleton scrap. Utilizing powerful plate nesting software SDS - Shop Data Standards, common structural parts such as base plates and splice plate connections can be processed while yielding virtually zero scrap.

Sophisticated material handling, carbide drilling technology and the absolute latest in plasma cutting techniques make the High speed flat drill and burn machine the most modern plate processor in the world today.

➤ High speed Flat Punch and Burn (HSFPB)



High speed Flat Punch and Burn is a plate processing machine which use punch bits for hole punching and HPR 200 plasma cutting.

It has rollers which grip the plate and move back and forth to ensure accurate punching of holes. The machine can also perform cutting operation of plates ranging from a minimum thickness of 5mm to a maximum thickness of 12mm.

It has 3 punching heads which can punch 3 different hole dia in a single program process.



► Robotic oxy-fuel CNC coping machine



Robotic oxy-fuel CNC coping machine is use for beam coping, flange tinning, straight and circular cutting. Holes can be made with its automated 5 axis controls:

x-axis travel : 46"

y-axis travel : 76"

z-axis travel : 30"

b-axis travel : 270°(bevel angle)

c-axis travel : 270° (torch rotation)

Rapid traverse speed of 100-400rpm and cutting speed of 730rpm



Inspection And Trial Assembly

Mock Up Assembly of Structure Columns



Indiana is committed to quality products to meet each clients requirement to test the product at the shop before it leaves for erection and to ensure the quality by performing trial assemblies at different levels as per clients specification.

the inspection and trial assembly, our qualified and well trained engineers ensure that all the clients requirements are met as per quality assurance plan. Any dimensional and alignment issues gets notified and the necessary actions are implemented .

Indiana has done trial assembly for maximum length of over 100m. During

Inspection And Trial Assembly

Mockup Assembly of Launching Gantry



Projects

Meja Thermal Power Plant - NTPC



VSL INDIA Launching Gantry



Launching gantry structure -
Equipment for Bridge construction

KOCHI Project



Power Project





FABRICATED STEEL BRIDGES

Annual Fabrication Capacity
12000+

Metric Tonnes Per Annum



Steel Bridges RDSO Approved

Steel bridges form an essential feature of a country's infrastructure and landscape. The Girders - (plate and open web girders) are widely used around the world for the construction of bridges due to their various advantages which include improvement in efficiency of installation and providing sustainable solutions, Indiana had

foreseen this market demand in India and commenced the fabrication of Steel Girders.

Indiana caters to the demands for long span bridges, railway bridges, foot bridges and medium span highway bridges.

Indiana fabricates two types of Girders

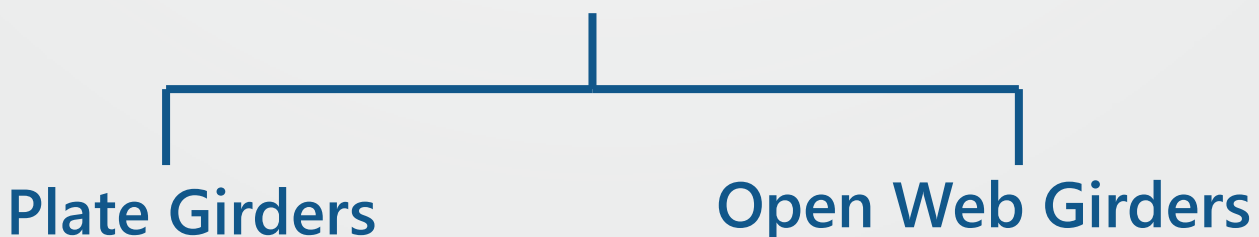


Plate Girder



Indiana fabricates plate girder by welding plates together to create the desired shape and size. We stock large plates of steel in the desired thickness which are then cut into cuts the flanges and web from the plate in the desired length and shape as per clients specifications. In a plate girder bridge, the plate girders are typically I-beams built up from separate structural steel plates which are welded.

The ability to customize a girder to the exact load conditions allows efficiency in the bridge design. Indiana can achieve the demands of plate girder as per clients design. Stiffeners are welded between the compression flange and the web to increase the strength of the girder.

Open Web Girders



Indiana has a team of highly qualified engineers for fabrication and erection of open web girder up to span length of 61.2m. Indiana fabricates open web girders in railways of span of 30.5m, 45.7m, 61.0m and 76.2m



The fabrication facility at Indiana is capable to carry out the complete inspection and trial assembly of bridges and the assembly has to be done on firm and leveled platform

Inspection And Trial Assembly



L&T, ROB Sangareddy



Erection At Site



JNPT- ROB



Contractor : JM MHATRE

Projects

JNPT- Uran (Jasai) ROB



JM Mhatre



QHSE Certificates



ISO 9001 : 2015



ISO 14001 : 2004



BS OHSAS 18001 : 2007

Standards

Welding standards

- ISO 3834
- AWS D1.1
- ASME Sec 9

Fabrication

- IS 7215

Raw materials

- IS 2062
- IS 1161
- IS 4923
- ASTM A1011 / A1011M
- ASTM A36 / A36M
- BS EN 10025

Shot Blasting and Painting

Shot Blasting

Indiana also has a state of art shot blasting and painting facility for heavy, medium and light steel products which has been imported from abroad. It meets with Indian and international standards. All our shot-blasting and painting techniques are environment-friendly.

At Indiana, both machine and manual blasting facilities are available and are covered under shade area which also includes painting booth. The estimated painting capacity at Indiana is **2500MT per month**. Indiana's automated blasting machine caters for maximum beam size: 1900mm height, maximum plate width: 850mm, maximum Length: 16000mm. The various coating materials used for blasting process are zinc, epoxy, polyurethane, vinyl esters and enamels.



Painting

Indiana has well equipped two sheds of painting booth of 16m width X 80m long and 20m width X 132m long respectively. We have special airless spray painting facilities which is capable of applying thick coatings at high speed. The high transfer efficiency helps us save considerable amount of material, thereby keeping the cost down and covers larger areas in minimal time. Indiana can provide paint thickness of 10-15µm, 15-20µm and 25-40µm per coatings as per clients specification. The Airless sprayers can apply high-viscosity materials without thinning and can excellently cover irregular surfaces.

Hot dip Galvanizing



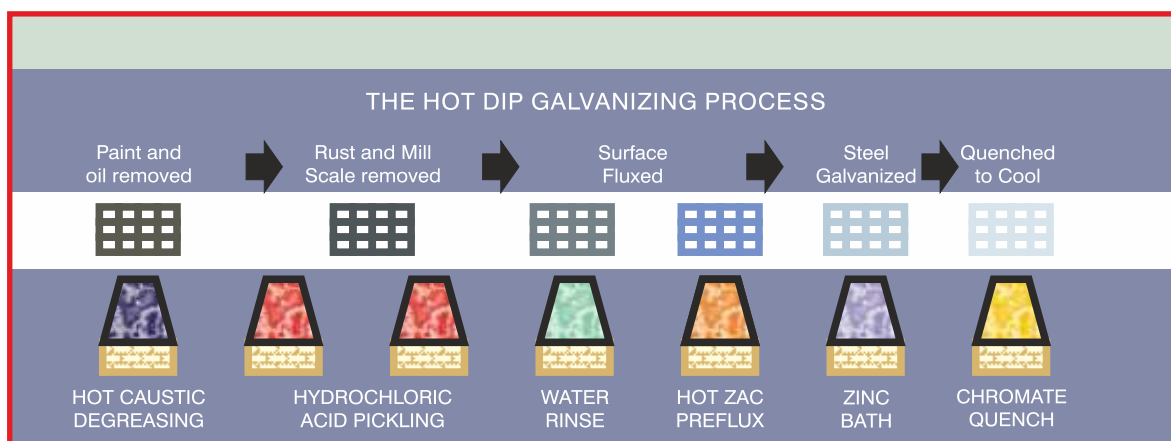
Indiana has its own state-of-the-art hot dip galvanizing facility which has been imported from Europe.

The zinc bath is 8m long X 1.2m wide X 2.5m deep. The proven capacity of the Plant is 30,000MT per year. The galvanizing furnace is equipped with pulse fire burners which are controlled by a PLC system. Indiana follows a seven tank processes and follows all the guidelines of the Pollution Control Board.

The galvanizing facility is equipped with zinc and acid fumes extraction systems, Effluent Treatment Plant for waste acid and rinsing water which helps in eliminating air pollution.

Galvanizing is performed in accordance with following standard:

- Indian standard : IS 2629
- American standard : ASTM A123
- British standard : EN ISO 1461
- German Standard : DIN 50976
- Australian Standard : AS/NZS 4680



CNC Machines

➤ Dye penetration test (DPT)



DPT also called liquid penetrant inspection (LPI) or penetrant testing (PT), is a widely used lowcost inspection method to locate surface-braking defects in all non-porous materials (metals, plastics or ceramics)

➤ Ultrasonic test (UT)

UT, is a family of non-destructive testing techniques based on the propagation of ultrasonic waves in the object or material tested. A common example is ultrasonic thickness measurement, which tests the thickness of the test objects, for example to monitor Pipework corrosion.



➤ Magnetic particle test (MPT)



MPT, is a non-destructive testing (NDT) process for detecting surface and slightly subsurface discontinuities in ferromagnetic materials such as iron, nickel, cobalt and some of their alloys. The zprocess puts a magnetic field into the part.

Clients

Some key clients of Indiana are shown below:



EVERSENDI



SIEMENS





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