

DESIGN, ENGINEERING OF PRE-ENGINEERED METAL BUILDING SYSTEMS...



Tiger Steel Engineering (India) Pvt. Ltd.
A reputation built in steel.

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Tiger Steel Engineering

AN ISO - 9001 - 2000 CERTIFIED COMPANY



Tiger Pre-Engineered Building System

Company Profile

Tiger Steel Engineering (I) Pvt. Ltd. (TSEIL) is a leading company in India in the segment of Pre-Engineered Metal buildings. The company was incorporated in India in the year 1995 and has two full fledged manufacturing units - first at Murbad near Mumbai commissioned in the year 1998 and second at Haridwar, commissioned in the year 2006. TSEIL is an offshoot of Tiger Steel Industries LLC, a top notch company in the UAE who are into design, manufacture and supply of Structural steel building systems for the past 40 years.

TSEIL offers turnkey solution to their Clients in the Design, Engineering, Manufacture, Supply and Completion of Pre-Engineered Metal Buildings. We have a full fledged Design and Engineering group working from the premises of our Head Office located at Millennium Business Park, Mahape, in Navi Mumbai. Our factory has the facility to fabricate all the components for a standard PEB. The factory deals in Built Up and Hot Rolled Sections as well as on Roll Formed and Press formed Cold Formed Sections including sheeting. We thereby address the full requirements of a Pre-Engineered Building in-house barring buying of insulation, skylights and fixing accessories from outside.



Apart from Pre-Engineered buildings, TSEIL have embarked on Fabrication of non PEB Steel Structures for conventional buildings or for industrial structures. We completed an export order for Australia comprising of four major industrial units including multi level structures. Similar other jobs are ongoing for major projects in India as well. We are in the process of enhancing this activity in a major way.

TSEIL has established a wide clientele across the country and have earned the reputation of being a high end and dependable Pre-Engineered Building (PEB) Manufacturer, rated amongst the first few in the Country. The PEBs being supplied by us serve various building categories as for example, Factory Buildings, Warehouses, Administrative Complexes, Show Rooms or Auditoriums. Our PEBs can cater to special requirements such as applicable to air conditioned premises, sound control, hygienic environment for pharmaceutical companies, fire proof rating for the structure, rust resistant protection, insulation and liner for controlling heat, ventilation requirements through natural ridge ventilation or turbo-vents, natural lights via translucent panels, enable collateral load to be loaded on the roof members, overhead cranes (even of high capacity), provide extremely wide unsupported spans for space utilization, high eave heights for the building, mezzanine floor with steel decking to facilitate concrete flooring, staircases and such. Our designs can cater to International codes as well as Indian codes.



Design / Engineering / Product Development

We call this 'The knowledge hub' - a world class design & engineering office manned with team of experienced Design and Engineers professionals and equipped with latest sophisticated design software.

Stadd-Pro, MBS, Primavera, MS projects are among the few design & detailing tools are in use at Tiger design & engineering center, thus delivers the quick, accurate and cost effective solutions.



The design office offer intelligent engineering solutions and support pre & post order functions with arrangement, fabrication & erection drawings. The computerized drafting & detailing simplify manufacturing programs & erection methods.

Tiger steel knowledge archives has Variety of design codes such as AISC, MBMA, AWS, UBC, ASCE, IBC, IS and many others to suit customer need of a pre engineered building at any where in the world.

The buildings are designed as per universal codes like AISC / IS, as per utility of the building in consultation with the client. Tiger steel's consistent efforts in research & development have positioned the organization as a lead runner in introducing innovative ideas and products in market place.

Standard Frame Types

Suggested width range (meters)... For most economical buildings.

FRAME SHAPE	FRAME TYPE	RECOMMENDED SPAN RANGE	REMARKS
	Rigid Frame Clear Span (RFCS)	20 - 40m	Suitable for Ware Houses, Godowns, Workshops, Industrial buildings having clear span requirement.
	Rigid Frame Multi Span - 1 (RFMS - 1)	30 - 50m	Suitable for large span Building without a valley gutter.
	Rigid Frame Multi Span - 2 (RFMS - 2)	40 - 60m	For span greater than 48m it is economical to go for RFMS-2 frame than RFMS - 1
	Rigid Frame Multi Span - 3 (RFMS - 3)	50 - 75m	They are economical than RFMS-2 for spans greater than 72m
	Rigid Frame Lean To (RFLT)	6 - 18m	Suitable for extension of existing buildings.
	Single Sloped building (SS)	15 - 30	Suitable for small spans with drainage facility to single side.
	Rigid Frame Multi Gable - 1 (RFMG - 1)	50 - 100	Economical than RFMS-1 but with valley gutter.
	Rigid Frame Multi Gable - 1 (RFMG - 1)	80 - 120m	Economical than RFMS-1 but with valley gutter.



Tiger Pre-Engineered Building System

Manufacturing Facility



Haridwar Plant



TSEIL factories are located in Mumbai and Haridwar, India. Each factory covers an area of 15000 sqm each. Our ISO 9001-2008 certified operations by TUV consistently deliver quality systems to all customers.

The operations department stationed at corporate office provide the planning and contractual inputs to factories ranging from 3month schedules for production. Raw material procurement/purchase plans, Engineering status and feeding of fabrication drawings apart from customer support in right time and quality.

The factories manufactures first class quality building system components such as **Columns, Beams, Purlins, Sheeting and Secondary structural** items meant for **Warehouses, Factories, Shopping Malls, Airports** apart from structural members meant for refineries, oil and gas, High rise structures, Steel plants, Thermal plants etc. Structures even exported to various clients in countries Middle East, Africa and even Australia apart from various local clients.



Murbad Plant



Both the factories quality assurance departments have set process and product performance parameters for various machineries to ensure process control and product quality. Fabrication bench marks are set up as per MBMA for PEB members & AWS D-1.1 for welding. TSEIL has got standard inspection and test plans generally for projects and even can establish project specific as well according to contractual requirements.

Features :

- Our State-of-the-art manufacturing facility is located at Murbard (30Kms from Kalyan) near Mumbai, Maharashtra. It houses special equipments to produce quality pre engineered buildings such as:

Automatic Beam Welding Line
Automatic Shot Blasting Line
Cold Roll Forming Line
Hydraulic Press Break Line
Plate Shearing Line
Radial Drilling Machine

- The welding process is as per American Welding Society Standards (AWS). All welders are qualified to required standards
- Well defined process on the shop floor ensures smooth flow of material and productivity
- All structural components to complete Pre-engineered building are produced in house and go through stringent quality checks prior to despatch.
- All major raw materials and bought out items are sourced from a Panel of approved supplier to ensure quality and timely supplies



Tiger Pre-Engineered Building System

Tiger Pre-Engineered Buildings

Pre-Engineered steel buildings are designed and fabricated to meet client requirements and in accordance with the Universal standards. A pre-engineered steel building consists of four important components - primary members, secondary members, metal roofing/Wall cladding and Connection Fasteners. These components are so designed that they are compatible with each other. The fabrication of these components is carried out in factory under strict quality control as per detailed shop drawings. These components are transported to site with proper markings and assembled at site as per erection drawings.

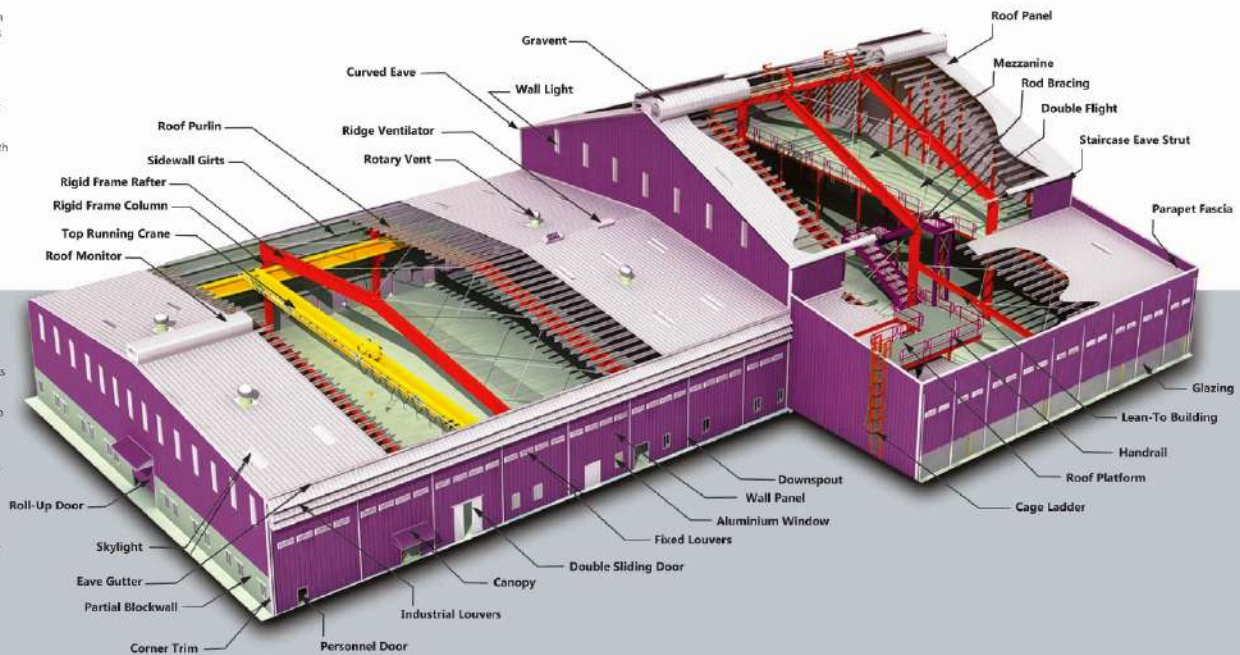
Design Engineering

Fabrication and Erection of Pre-Engineered Metal Building Systems...



Salient Features

- Uses high strength steel plates having yield strength of 345 Mpa (i.e. grade 50) for fabrication of primary members like columns, rafters, beams etc. Hence structure becomes light and economical.
- Uses tapered beam section concept, thus ensuring right amount of structural steel at right place.
- Built up sections are made from HR Plates with submerged arc welding process in automatic welding machine in the factory.
- Uses cold formed either galvanized or non-galvanized sections for secondary members.
- Usage of metal colour coated material for sheets and cladding which are durable and aesthetically good looking.
- Column free buildings with longer spans.
- Building with mezzanine, cranes with different functional requirement.
- Speedy and planned execution drastically cuts down time and costs of projects.
- Single source Responsibility from inception to completion, covering design, engineering, detailing, fabrication supply and erection.
- Design which provide structurally stable PEBs using universally accepted codes and guidelines.
- Special building components like skylights, ridge ventilators, turbo ventilators, sliding doors, windows, roof curbs etc. can be supplied and installed.
- Insulation to maintain temperature under control.

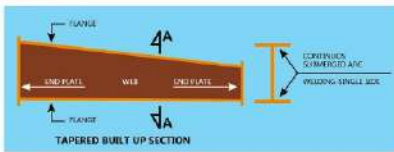




Tiger Pre-Engineered Building System

Primary Members

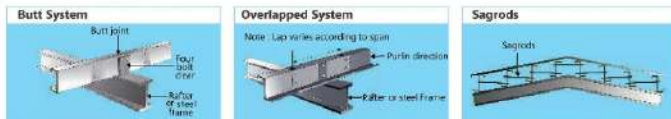
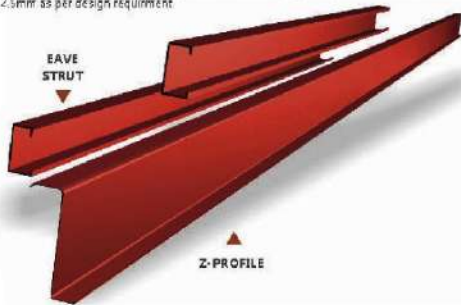
Primary members consists of columns, rafters, beams etc. These are fabricated from high strength Gr. 50 HR Plates. Plates are cut to size and shape. Built up sections are made from these Plates in Automatic Beam welding line by submerged arc welding.



Secondary Members

Secondary Members used in a PEB include purlin, side runners, eave struts, fascia channels, door posts window posts, rafter stays, columns stays, base angles and other miscellaneous structural parts.

- Purlins and girts are cold roll formed light gauge "Z" sections varying in depth from 180 to 300mm and in thickness from 1.5mm to 2.5mm as per design requirement.



Connection Fasteners

- All primary connection fasteners will be with High Strength Bolt of Grade 8.8 conforming to the physical specification of ASTM A325 or equivalent. These fasteners shall be hot dipped electrogalvanized to ensure total corrosion protection.
- All secondary connection fasteners shall be with machine bolts of Grade-4.6 conforming to the physical specification of ASTM A307 or equivalent.
- The fasteners for the cladding/roofing includes GI self tapping screws/GI self drilling screws in varying sizes to suit the roofing/cladding requirement. These are accompanied with neoprene or EPDM washers to obtain long service and maximum weather resistance.

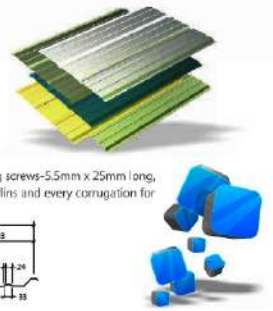
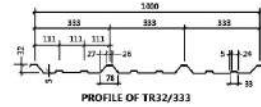


Roof, Cladding and Profile Systems

Tiger Steel offer the following profiles for applications in the building

Tiger Trapezoidal Profile TR 32/333

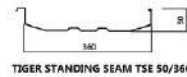
The profile shall be fixed to the purlins/runners by means of GI self tapping screws-5.5mm x 25mm long, through profile troughs at every alternate corrugation for intermediate purlins and every corrugation for end purlin/eave strut.



Tiger Standing Seam Profile TS 50/360

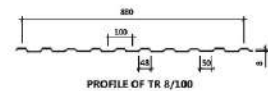
The features

- This profile system is based on the principle of interlocking with no penetration of screws from top surface ensuring a leak proof systems.
- The portable machine used for roll forming of this profile allows to roll the sheets in single lengths from ridge to eave upto 40m.



Tiger Liner Panel TR 8/100

This is used for false ceiling partitions and liner panel applications.



Tiger Flat Panel Systems

Applications

- Ideally suited for exterior/interior applications.
- Major application areas :
 - False ceiling in oil filling stations canopy.
 - Many other architectural applications





Tiger Pre-Engineered Building System



American Axle



Yog Bhavan, Haridwar



A S Cargo - Pune



All Time Plastics - Silvassa



Infracool



ITC choupal



Global Wind Power - Silvassa



Metro Polythene - Daman



Kinder India - Pune



MEccalte



Indo - Arya



Saint Gobain



Nokia



Motorola



Sai Corp - Chennai



ITC Grain Godown - Ujjain



Alana Zaheerabad



Ramco



Perics - Chennai



Fitolay - Ranjangaon