TIS INDIA

TECH INNO STRUCTURES (TIS) INDIA

An Infrastructure Company

Railway Signalling

Structural Engineering

Management Staffing

❖ Our Vision :

- Strive to be the state-of-the-art and consistent company for every customer, regardless of size, by delivering the best and most optimal building solutions.
- Deliver solutions and services to clients with the utmost quality while adhering to Safety and Quality standards.
- Ensure our continued success and achieve industry leadership through individual and collective dedication, innovation, and integrity.
- Provide our employees with opportunities for both personal and professional growth.
- Ensure a safe work environment for all employees.
- Develop and maintain relationships with vendors and customers based on open communication, mutual trust, and respect.

❖ About Us:

M/S TECH INNO STRUCTURES (TIS) INDIA is a Bangalore based company engaged in creative design solutions driven by high quality principles, complete safety standards and ethical business practices.

TIS India is a strong and growing foothold premier infrastructure company specializing in

I **Railway Signalling**

II **Steel Structural Engineering**

Our company embodies a deep-seated passion and unwavering commitment to infrastructure projects set us apart. We pride ourselves on our ability to craft creative and efficient design solutions tailored to meet the unique needs of each project. With a focus on excellence, we employ cutting-edge technology and industry best practices to ensure that every structure we design and erect is both robust and aesthetically pleasing.

At TIS INDIA, safety is paramount. We adhere to stringent safety standards to protect our workers, clients, and the communities in which we operate. Our ethical business practices underpin all our operations, fostering trust and long-term relationships with our clients and partners.

Our services encompass the entire spectrum of steel structural roofing projects, from the initial design and analysis to the final fabrication and erection. Our expert team brings a wealth of experience and technical expertise to every project, ensuring precision, durability, and exceptional quality.

We are dedicated to pushing the boundaries of innovation in infrastructure projects, continuously exploring new methods and technologies to enhance our offerings. Whether it's a complex industrial facility or a contemporary commercial building, TIS INDIA is committed to delivering superior results that exceed expectations.

Join us as we build the future with steel, driven by our core values of quality, safety, and integrity. TECH INNO STRUCTURE (TIS) INDIA is your trusted partner in creating resilient and inspiring steel structures.

❖ Why Choose Us?

Choosing **TECH INNO STRUCTURE (TIS) INDIA** means partnering with a company dedicated to delivering comprehensive and exceptional steel structural solutions. Here's why we stand out:

End-to-End Steel Structural Solutions: We provide a seamless experience from concept to completion, encompassing design, analysis, detailing, project estimation, and execution. Our holistic approach ensures that every aspect of your project is handled with expertise and precision.

In-House Expertise: Our team includes experienced structural engineers, project estimation specialists, and project execution professionals. This in-house expertise allows us to manage projects efficiently and effectively, ensuring high-quality outcomes.

State-of-the-Art Production Facility: We boast a cutting-edge production facility, enabling us to execute projects on time without compromising on quality. Our advanced capabilities ensure that we meet and exceed client expectations.

Commitment to Quality: We are unwavering in our commitment to delivering consistent quality in both our products and services. Our rigorous quality control processes ensure that we meet the highest standards, satisfying the demands and expectations of our customers.

Customized Solutions: We understand that each project is unique, and we strive to provide tailored solutions that meet the specific requirements of our clients. Our customized approach ensures that we deliver optimal results that align with your vision and needs.

Choose TECH INNO STRUCTURE (TIS) INDIA for reliable, high-quality, and customized steel structural solutions. We are dedicated to making your project a success from start to finish.

Here are some additional strengths that distinctly set us apart:

SQDC Motto: Our prime motto revolves around Safety, Quality, Delivery, and Cost (SQDC), ensuring balanced excellence in every project aspect.

One-Stop Solution for Steel Design, Supply & Execution: We offer a comprehensive service for all types of roofing solutions like PEB, Tensile, Steel Mangalore tiles etc., making us your single point of contact for the entire project lifecycle.

Transparent Design and Quantities: We maintain complete transparency in our design and material quantities, providing clients with detailed explanations to help them make informed decisions and achieve satisfaction.

Design Optimization: We prioritize optimizing designs to deliver cost-effective and efficient solutions without compromising on quality or performance. Our designs undergo rigorous validation to ensure they meet the highest standards of safety and efficiency

Dedicated and Committed Team: Our team is highly dedicated and committed to delivering exceptional results, working diligently to meet project goals.

Adaptability to New Methods: We embrace new methods and requirements, continuously improving our processes and solutions to stay at the forefront of the industry.

Customer Loyalty and Repeat Orders: Our commitment to quality, transparency, and customer satisfaction has earned us the loyalty of our clients, resulting in a high rate of repeat orders.

❖ Key Capabilities and Services

- **Experienced Design Team:**
  Our design team boasts a wealth of experience, bringing a deep understanding of industry standards and innovative practices. We specialize in creating customized solutions tailored to meet the unique needs of each project. With a focus on precision and creativity, our team ensures that every design is both functional and aesthetically pleasing.

- **High-Capacity Steel Fabrication Unit:**
  We operate a state-of-the-art steel fabrication unit with a production capacity of 200 units per month. Our facility is equipped with the latest technology and machinery, enabling us to handle large-scale projects efficiently. Our skilled workforce adheres to the highest quality standards, ensuring that every piece meets rigorous specifications and durability requirements.

- **Dedicated Erection Team:**
  Our erection team is dedicated to delivering impeccable on-site assembly and installation services. With extensive training and experience, our team ensures that all structures are erected safely, accurately, and in compliance with all regulatory standards. We take pride in our meticulous attention to detail, which guarantees the structural integrity and longevity of our projects.

- **On-Time Delivery with Comprehensive Project Management:**
  We understand the critical importance of adhering to project timelines. Our comprehensive project management approach ensures on-time delivery, from initial design through to final erection. We employ robust planning, constant monitoring, and proactive problem-solving to mitigate risks and keep the project on track. Our commitment to punctuality and reliability means our clients can trust us to meet their deadlines without compromising on quality.

❖ PRODUCTS , SOLUTIONS & SERVICES

Tech Inno Structures (TIS) India is a strong and growing foothold premier infrastructure company specializing in:

I Railway Signalling:

Consulting | Freelancing | Training | Management Staffing Services for Railway Signalling

A railway signalling system is an essential component of rail transport that manages and controls the movement of trains on a railway network. Its primary purpose is to ensure the safe and efficient operation of trains by preventing collisions, ensuring trains run at safe speeds, and maintaining a safe distance between trains. The system uses a combination of signals, track circuits, interlocking, and communication devices to regulate train movements.

Tech Inno Structures (TIS) India offers the following services in Railway Signalling Systems:

- Implementation services on Train Management System (TMS) & Automatic Train Supervision (ATS)
- TMS/ATS System Interface Management and integration with other systems or subsystems
- Interface Management for OCC (Operational Control Centre) / Centralised Traffic Control (CTC) /Backup Control Centre (BCC) Building
- Provision of design services, including TMS data preparation and data validation support
- Supply of manpower for design and testing & commissioning (T&C) activities of signaling systems

II Steel Structural Engineering:

Pre Engineering Building (PEB) | Steel | Tensile | Metal Roof | Truss work | Glass & Polymer | General Structures

Steel structural engineering focuses on the design, analysis, and construction of steel frameworks and structures. It involves using steel as a primary material to create buildings, bridges, towers, industrial facilities, and other infrastructure. Steel structural engineers ensure that these structures are safe, stable, and capable of withstanding various forces, such as loads, wind, and seismic activity.

Steel structural engineering is vital in creating resilient and durable structures that meet the demands of modern infrastructure.

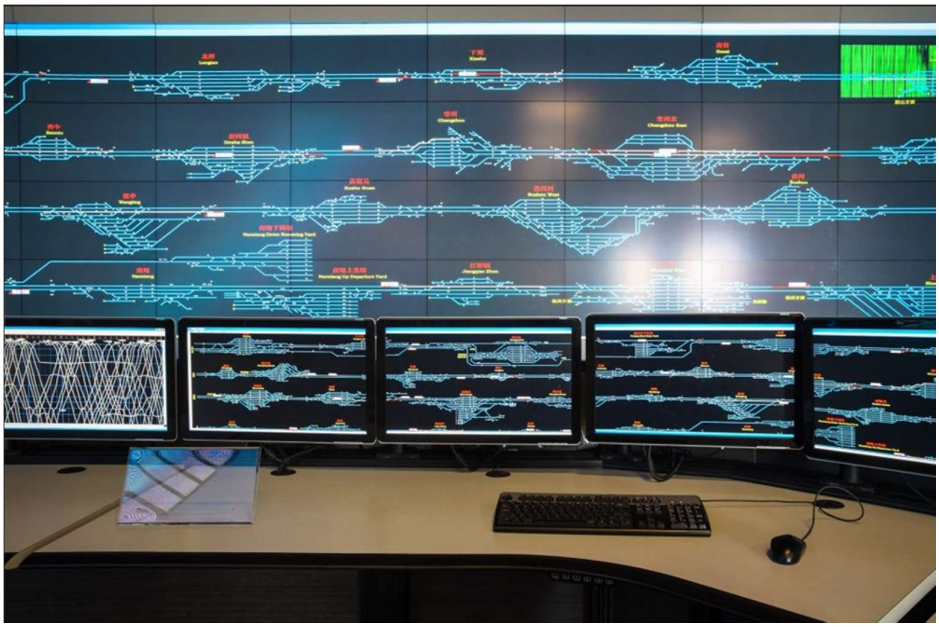
Tech Inno Structures (TIS) India offers the following services in Steel Structural Engineering:

- Comprehensive Design, Analysis, Fabrication, and Erection of All Types of Steel Structures.

I. Railway Signalling:

Train Management System (TMS) & Automatic Train Supervision System (ATS):

The Train Management System (TMS)/Automatic Train Supervision System (ATS) is an Integrated, Advanced systems that oversee the overall operation of the railway network, including train scheduling, routing, and real-time monitoring of train locations.



- TMS/ATS tracks the online state of wayside equipment's like Signals, Tracks, Points etc.
- TMS/ATS can be operated Centrally or Locally
- TMS/ATS facilitate Timetable (Plan & Operational)
- TMS/ATS facilitate to optimize the traffic movement to utilize the infrastructure effectively to improve the train operation and boost the ecosystem
- HMI/GUI-Train Describer, Train Graph (TG)
- Management Information System (MIS) Report, CMC, RMS etc.,

Consultancy and Freelancing / Implementation Services we provide in Signalling:

- Implementation of TMS/ATS
- TMS/ATS System Interface Management and integration with other systems or subsystems
- TMS/ATS System Architecture (Hardware & Software) Define and implement based on the client requirement
- Interface Management for OCC (Operational Control Centre) Building
- Provision of design services, including data preparation and data validation support
- Training to Client on TMS and ATS systems
- Management Staffing Services For Railway Signalling
- Electronic Interlocking (EI) & Other subsystems

II. Steel Structural Engineering:

PEB | Steel | Tensile | Metal Roof | Truss work | Glass & Polymer | General Structures

1. Pre-Engineered Buildings (PEBs) :

Pre-Engineered Buildings (PEBs) are steel structures that can be constructed with spans of up to 30 meters without intermediate columns. These buildings offer construction times that are 50% faster than traditional methods. The use of optimized materials, custom-designed steel sections, and efficient construction techniques result in significant cost savings, both direct and indirect.

The wider bay spacing reduces foundation costs. PEBs also allow for future expansions and relocations due to their easy dismantling and reassembling features. Moreover, designs can be tailored to meet the specific needs of customers and locations.

1.1 Applications

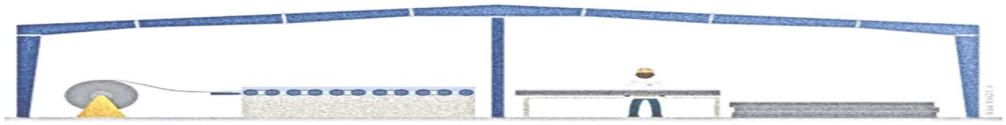
- Industrial Sheds
- Workshops
- Warehouses / Godowns
- Conventional Hall
- Aerospace Hangers
- Service Stations
- Parking Lot
- Cold Stores
- Transport terminals
- Food Courts
- Auditoriums
- Showrooms

1.2 Project Gallery

1.3 Type of PEB Structures

PRACTICAL WIDTH 6M - 60M

CLEAR SPAN (CS)

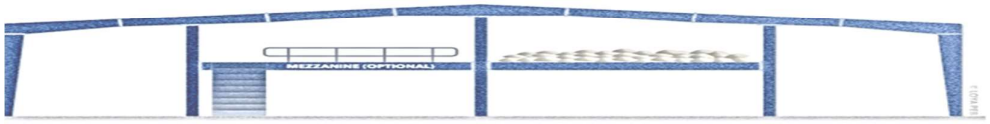


PRACTICAL WIDTH 24M - 48M

DOUBLE BAY, SINGLE RIDGE (DBSR)

PRACTICAL WIDTH 36M - 72M

TRIPLE BAY. SINGLE RIDGE (TBSR)

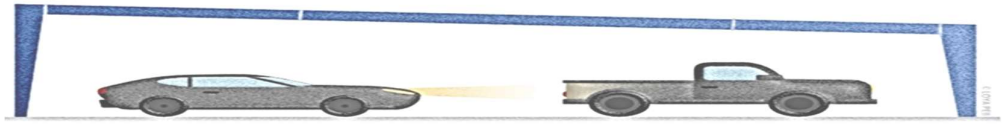


PRACTICAL WIDTH 48M - 96M

FOUR BAYS, SINGLE RIDGE (DBSR)

PRACTICAL WIDTH 24M - 60M

MULTI-GABLE (MG)



PRACTICAL WIDTH 3M - 18M

SINGLE SLOPE (SS)

2. Tensile fabric Structures :

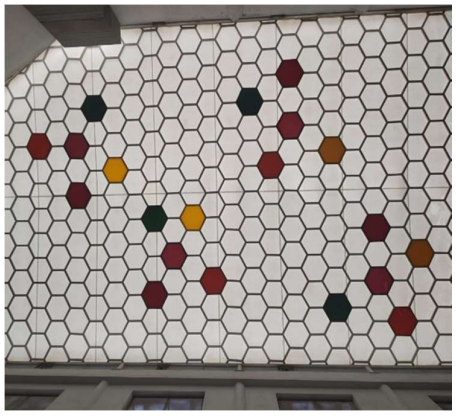
Tensile Fabric Structures are lightweight roofing systems widely utilized as architectural shades. These structures are distinguished by the tensioning of a membrane system, typically comprising wires or cables, which provides essential support and stability to the structure.

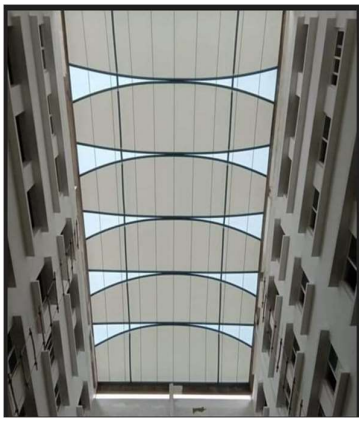
The versatility of tensile fabric structures allows them to be deployed in a diverse range of applications. Their lightweight nature ensures ease of transport and installation, making them an efficient choice for various projects. The inherent flexibility of these structures means they can be custom-designed to meet specific requirements, offering both functional shade or shelter and aesthetic appeal.

Beyond their practical benefits, tensile fabric structures serve as striking architectural features. Their unique designs and forms can create impressive focal points, enhancing the visual interest of any space. By combining functionality with innovative design, tensile fabric structures not only fulfill practical needs but also contribute significantly to the overall architectural beauty of their environments.

2.1 Applications

- Restaurant Roof
- Shopping Malls
- Stadium Covering
- Amphitheatres
- Car Parking
- Agricultural Roof
- Residential Sit-out cover
- Walkways
- Food Courts
- Courtyard





2.2 Project Gallery

2.3 Forms of Tensile Fabric

Tensile fabric structures come in various forms, each characterized by unique properties, aesthetics, and functionalities. Here are some common forms of tensile fabric:

2.2.1 Membrane Structures

Membrane structures are characterized by their lightweight and flexible nature, often made from materials like PTFE-coated fiberglass or PVC-coated polyester. They are commonly used for large-scale roofs, canopies, and shelters.

Types of Membrane Structures:

Single Curvature: Simple shapes like cones or barrel vaults.

Double Curvature: Complex shapes like hyperbolic paraboloids or saddle surfaces, offering greater stability and aesthetic appeal.

2.2.2 Cable Nets

Cable nets are formed by a network of cables that support a membrane or fabric, creating a lightweight yet strong structure. They are typically used for large spans such as stadium roofs or exhibition halls.

2.2.3 Air-Supported Structures

These structures rely on internal air pressure to maintain their shape. The fabric is anchored to the ground, and air blowers continuously supply air to keep the structure inflated. They are often used for sports facilities and temporary pavilions.

2.2.4 Pneumatic Structures

Similar to air-supported structures, pneumatic structures use air pressure but in a different manner. They consist of air-inflated cushions or tubes that form the primary structural element. Examples include inflatable domes and arches.

2.2.5 Hybrid Structures

Hybrid structures combine tensile fabric with other materials like steel or timber to create a composite structure. This combination allows for greater design flexibility and can be used in various architectural applications.

2.2.6 Shade Sails

Shade sails are tensioned fabric structures anchored at multiple points to create shaded areas. They are commonly used in outdoor settings like parks, playgrounds, and patios. They are relatively simple to install and can be designed in various shapes and configurations.

2.2.7 Tensegrity Structures

Tensegrity (tensional integrity) structures use a combination of tensile and compressive elements. In these structures, cables are in tension and rods are in compression, creating a self-stabilizing structure. They are often used in art installations and experimental architecture.

2.2.8 ETFE Structures

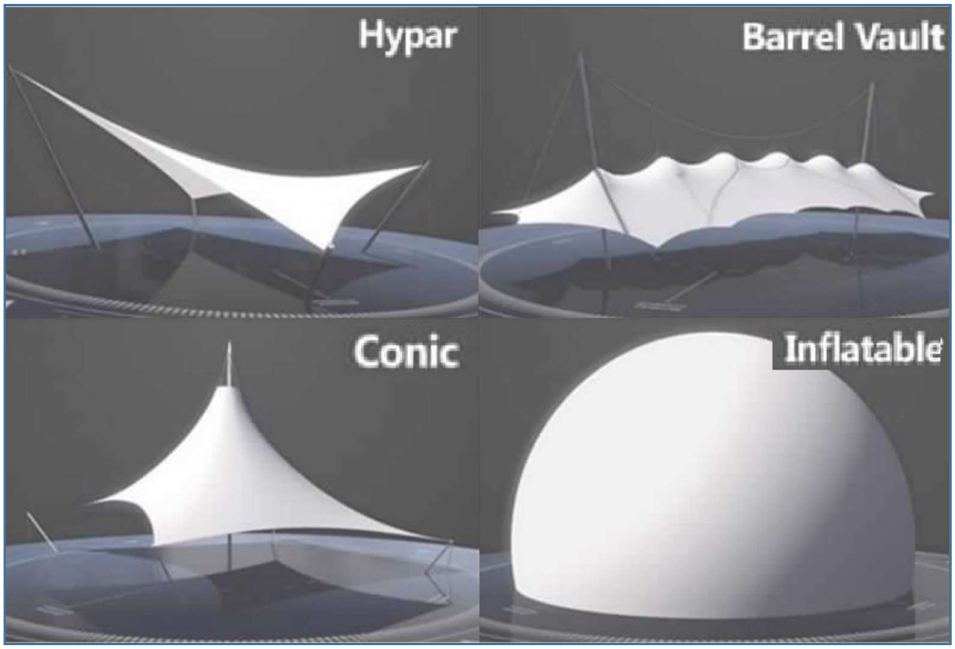
ETFE (Ethylene Tetrafluoroethylene) is a type of fluoropolymer that can be used as a lightweight, durable alternative to glass. ETFE cushions are inflated to provide insulation and structural stability. These structures are often used in modern stadiums and large atriums.

2.4 Materials Used:

- PTFE (Polytetrafluoroethylene): Known for its durability and resistance to UV light.
- PVC (Polyvinyl Chloride): A cost-effective option with good flexibility and weather resistance.
- ETFE (Ethylene Tetrafluoroethylene): Lightweight, transparent, and highly durable.
- Applications:
- Sports Facilities: Stadium roofs, practice domes.
- Commercial Spaces: Shopping centers, exhibition halls.
- Public Spaces: Canopies, pavilions, walkways.
- Residential Spaces: Pergolas, shade sails, garden structures.

2.5 Advantages:

- Lightweight: Easier and quicker to install compared to traditional building materials.
- Flexibility: Can create unique and complex shapes.
- Durability: Resistant to weather, UV rays, and fire.
- Aesthetics: Offers a modern and dynamic appearance.
- Sustainability: Often made from recyclable materials and can contribute to energy savings by providing natural light and shade.
- Tensile fabric structures are versatile and innovative, offering numerous design possibilities and practical benefits for various applications.



3. Multi-Storey Steel Building & Mezzanine Floor Structures

Multi-storey steel buildings are advanced pre-engineered structural frames employed in both residential and commercial construction projects. They offer significant advantages over traditional methods, boasting construction speeds up to 50% faster. These buildings are renowned for their superior fire resistance, acoustic insulation, and thermal efficiency. They adhere to rigorous quality control standards, ensuring high precision and accuracy in every aspect of their design and construction.

Mezzanine floors are integral to contemporary architecture, prioritizing the enhancement of natural light and spatial aesthetics.

3.1 Applications

- Residential Buildings
- Commercial Buildings
- Conventional Hall
- Office Space
- Bridges
- Storage Spaces in Factories
- Storage Spaces in Factories
- Showrooms
- Retail Mezzanine Floor
- Office Mezzanine Floors
- Auditoriums

3.2 Project Gallery

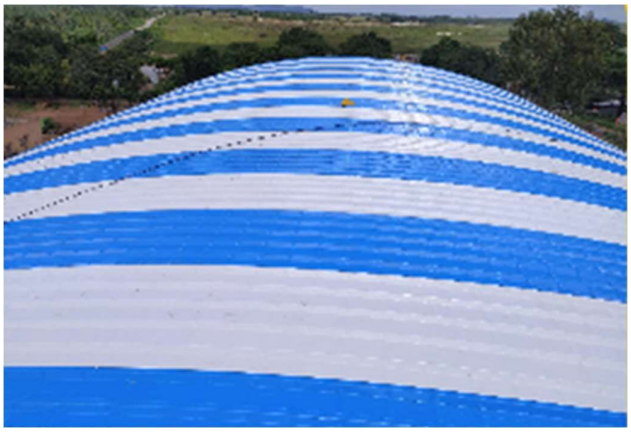
4. Metal Roof Structures

Metal Roof structures are the top covering of a Building which are popular for their Versatility, Variety of options and ability to be customized for each individual structure which includes Colour, Shape, and Style etc.
Some of the commonly used Metals for such structures include Galvalume coated steel, Galvanized Steel, Stainless steel, Aluminium, Zinc Copper etc.

4.1 Applications

- Shopping Mall
- Stadium Covering
- Hospitals
- Car Parking
- Military Structures
- Restaurant Roof
- Walkways
- Courtyard
- Food Court
- Farm House

4.2 Project Gallery



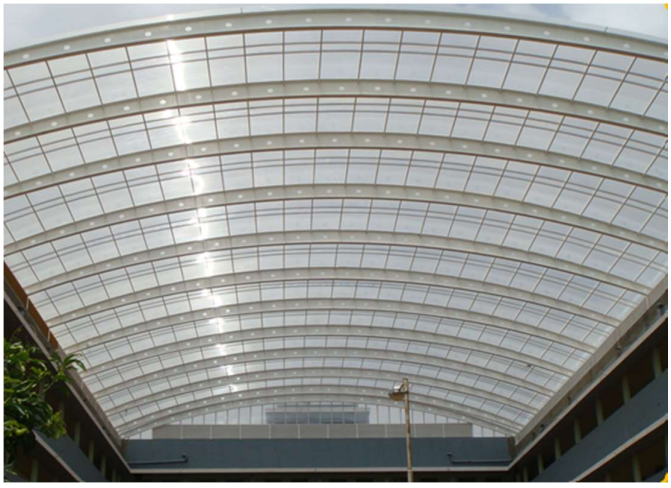
5. Polycarbonate Sheet Roofing Structures

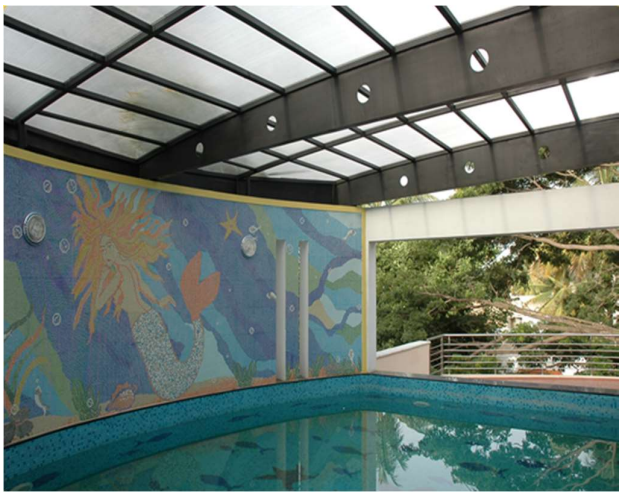
Polycarbonate Roof is a very strong and resilient thermoplastic material. Polycarbonate is also very lightweight and capable of withstanding extreme temperatures, either hot or cold. Due to these qualities it makes for an effective roofing material for many applications. One downside to polycarbonate sheets is that they are not scratch resistant and denting or scratching on the surface is possible if extra caution and care are not taken.

5.1 Applications

- Shopping Mall
- Commercial Skylights
- Hospitals
- Walkways
- Green House Buildings
- Restaurant Roof
- Car parking
- Entrance Canopies
- Courtyard
- Residential Sit-outs& Skylights

5.2 Project Gallery

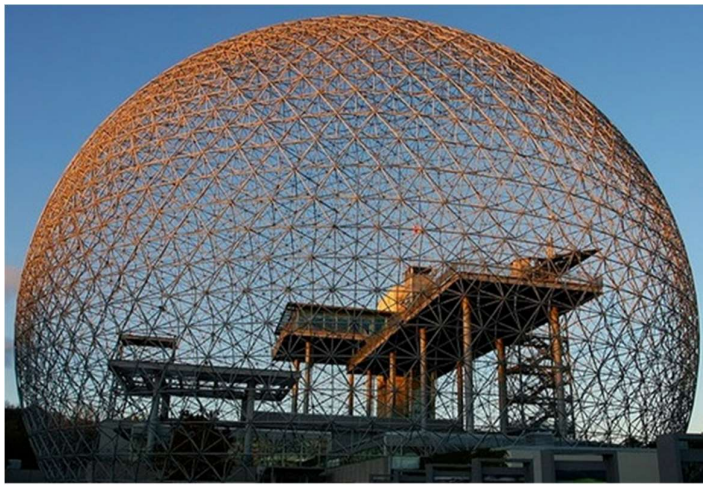




6. General Steel Structures

Following are some of the General steel structures which are commonly used in

- Space Frames
- Bridge
- Glass Skylights and Canopies
- Mangalore Tile roof
- Pergola
- Solar Module mounting structures
- Façade with Corten & Perforated sheet

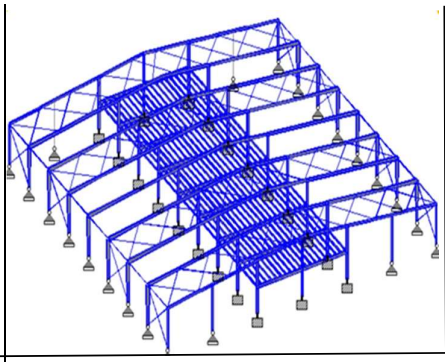
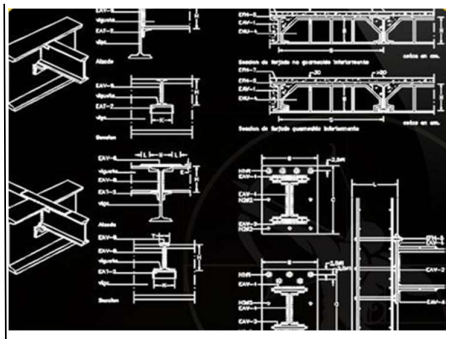
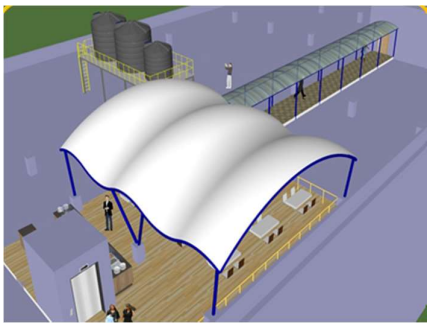
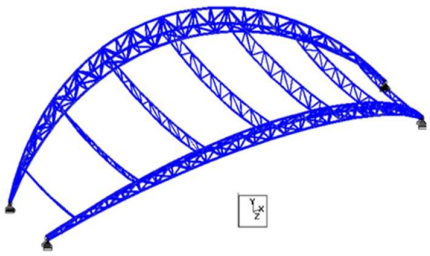
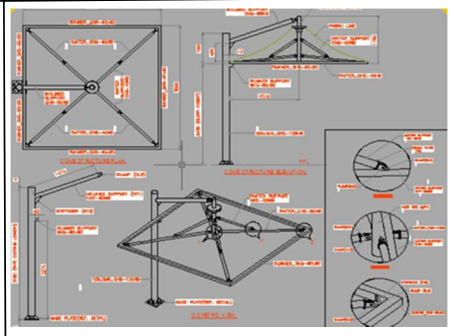
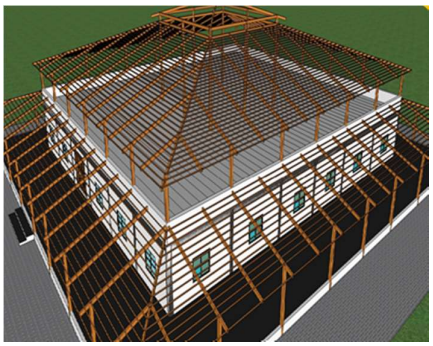
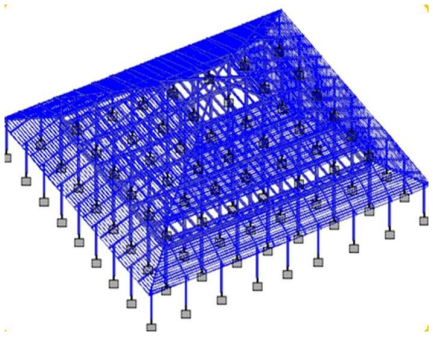
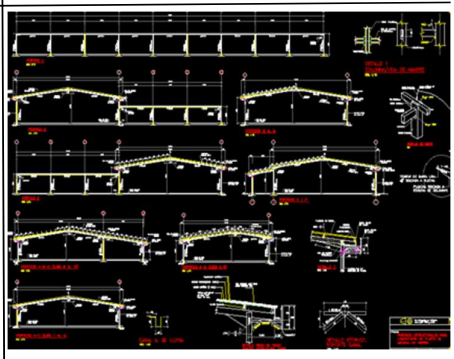
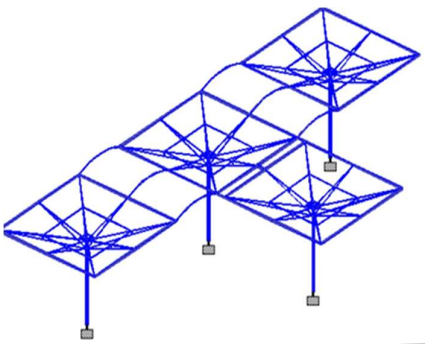
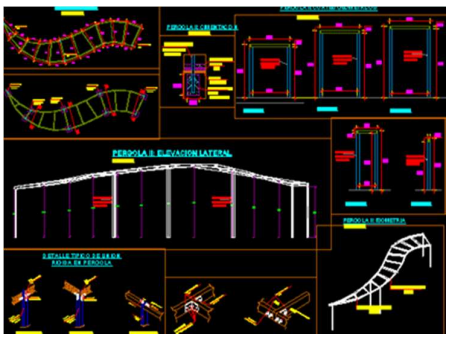


6.1 Applications

- Shopping Mall
- Commercial Skylights
- Hospitals
- Walkways
- Green House Buildings

6.2 Project Gallery

❖ Softwares Tools we use for Design, Analysis & Detailing in Steel Structure

3D CONCPETS	DESIGN & ANALYSIS	DETAILING
SKETCH-UP	STAAD-PRO	AUTO-CAD
		
		
		
		

❖ Standards we use for Design, Analysis & Detailing in Steel Structure

- IS:800 : General Construction in Steel
- IS:801: Cold formed steel
- IS:816 : Metal Arc Welding for general construction in mild steel
- IS:875-P1 : Dead loads of Building materials & Stored materials
- IS:875-P2/AISC & MBMA : Imposed Loads
- IS:875-P3 : Wind Loads
- IS:1893 – 2002 : Seismic Loads
- IS:2062 : Hot rolled medium and high Tensile structural Steel

❖ Material Selection Standards

MS ITEMS	ALL MS PLATES PROCURED CONFIRMS TO IS-2062 /IS 4923/ IS 1161
BOLT & NUTS	ALL NUT & BOLTS ARE CONFIRMING TO IS-1367
ELECTRODES	SPECIFICATIONS FOR ALL ELECTRODES METAL ARC WELDING OF HIGH TENSILE STRUCTURAL STEEL CONFIRMING TO IS-1442

❖ Quality in Welding

All the Steel Structures fabricated are welded in Fool Proof Type ensuring 100 % penetration & weld thickness

❖ Our Standard Suppliers

TECH INNO STRUCTURES (TIS) INDIA

Design & Head Office
93, 2nd Floor, 4th Main Road
Srigandhadakavalu, Chennigappa Layout,
Sunkadakatte, Bangalore-560091
Mobile: +91 9538598198 / +91 9901894490
Email: info@techinnostructures.com

Factory
Averahalli Village,
Sompura Hobli, Nelamangala,
Bangalore Rural District-562111