



www.siscol.in

**ENGINEERING
INNOVATIVE
STEEL SOLUTIONS**



VALUE OFFERING

1

**Concept &
Architectural
Drawing**

2

**Basic &
Detail
Designing**

3

**Fabrication
Drawing**

4

**Structure
Fabrication
& Final
Finishing**

5

**Logistics/
Delivery
to Door-step**

6

**Installation &
Project
Management**

STEEL: the Future of Construction

INDIAN construction sector is witnessing a major change as it is progressively opting for steel structure based construction solutions in lieu of RCC system – on the same line as countries like the US, Japan, Korea and China had done during their years of major infrastructure growth. Steel based construction, apart from offering higher strength solution, enables completion in a much shorter time and also gives technical flexibility for complex construction.

A substantial part of these structures are factory manufactured and assembled at ground level to enable rapid installation at site. The manpower, as well as area required at site, for steel based structure is also considerably less compared to RCC construction.

SISCOL – Champion of Steel in India

Pioneered by a group of visionary and experienced veterans of India's Steel and Construction industry, SISCOL entered into a "Technical Service Agreement" with iconic Yongnam Engineering and Construction Limited of Singapore to provide state-of-

the-art and complete end-to-end solutions as a part of their value proposition.

SISCOL offers customized structural steel system for heavy construction with design, engineering and construction solutions from concept to completion.

SISCOL takes innovation in engineering and strives to go beyond the realm of conventional construction with its team of leading engineers, world-class manufacturing and efficient project handling for heavy project construction.

Innovative Engineering

SISCOL heavy steel construction solutions are engineered for large projects and heavy steel application to enable projects to achieve quality construction with speed and optimal cost.

SISCOL engineering delivers customized solutions to its customers from planning to completion stage.

Our state-of-the-art plants in Bhilai manufacture and deliver the best quality structural systems and project management network delivers turnkey construction solutions in steel.





CONCEPT, DESIGN & FABRICATION

SISCOL offers a comprehensive package of architectural and engineering services including:

- **Architectural Engineering**
- **Structural Engineering**
- **Construction Engineering**
- **Value Engineering**
- **Design Optimization**

The engineering work in structural steel design includes in-depth analysis and design of the complete structure, in addition to the preparation of construction drawings and shop details. SISCOL structural design team uses latest designing technologies for analysis and design software such as Staad Pro, Tekla and others.

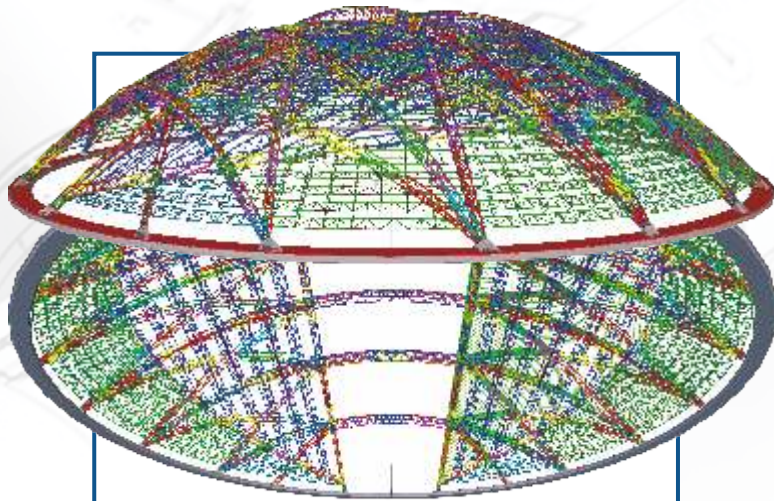
SISCOL proactively adapts to newer methods of creating architectural designs, be it real time construction or through advanced software technologies. We adhere to the concept of value engineering and its key concepts are:

- Design Management and Co-ordination for Buildings and Steel Structure
- Value added steel solutions
- Planning and Control of Design to match Construction activities along with Cost and Time schedules
- Design Optimization, Industrial Engineering, Process Planning and Resource Management Techniques
- Sophisticated information systems
- Simple onsite techniques



Architectural Engineering

- Form finding using Rhinoceros and AutoCAD
- Architectural Design/Statutory Approvals/Audits
- Architectural Detailing
- Service Engineering/Detailing/Statutory Approvals
- Interface Management
- Interior & exterior works, engineering & detailing
- Generation of presentations
- 3D Animations/Walk-throughs
- Photo-realistic images



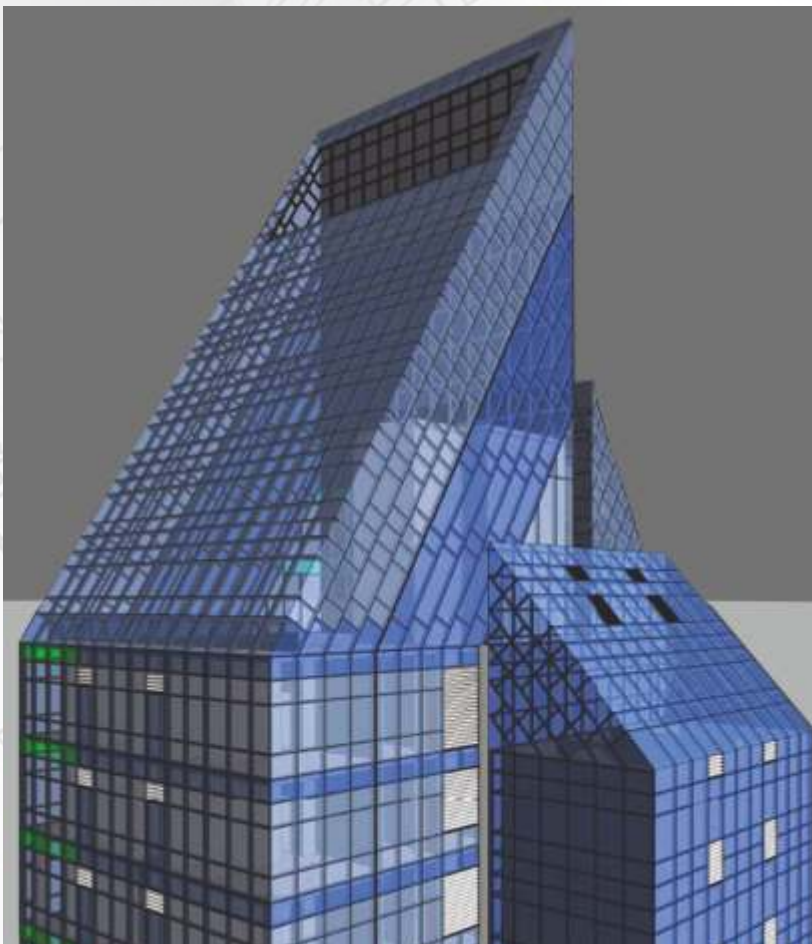
Structural Engineering

- Erection analysis/Inspection Hold Points/Checklists
- Temporary work analysis and design
- Generation of Design Intent Drawings
- Connection Design
- Generation of tender specifications/BoQ/Quantity statements
- Product/Process standardization



Construction Engineering

- 3D-modeling in Tekla, Bocad and AutoCAD
- Generation of Assembly/Erection/Fabrication/Shop
- Temporary works drawings
- Generation of material lists/Bolt lists etc.
- Inferences and clash checks
- Generation of Fabrication procedures/checklists
- Generation of Construction methodology drawings



Value Engineering/Design Optimization

- Signature/Steel Multistoried Buildings
- Industrial and Storage Sheds
- Infrastructure Projects like Airport Hangars, Skywalks, Terminal Building Roofs etc.
- Steel intensive turnkey projects



STRUCTURE FABRICATION & FINISHING

SISCOL Steel Structure Solutions are offered in combination of the following standards:

- High Strength Steel of YS from 345 Mpa – 550 Mpa
- Hot Rolled Steel Sections from 245 Mpa to 550 Mpa YS in various sections such as H, I, C, L, U, achieving maximum steel optimization
- Cold-formed steel for light framing
- Advanced decking systems to ensure Concrete-Steel bonding with the help of shear studs or a composite deck system
- Shot blasted steel framing offering the best surface cleaning of steel
- Corrosion resistant Priming on Steel Frames/Members
- Standard painting with low VOC using synthetic paints or epoxy based paints
- Fire resistance paint coating to qualify for all Indian and International building code fire safety requirements
- High strength hardware for primary and secondary members
- Green materials to achieve high LEED ratings
- Complete interface solutions with external glazing, ACP Clad Support, Brick and Internal MEP, Interiors and finishes



I-Girder



Box Section



H-Beam



Trusses



Rolled Section



Pipe structure

- **Cutting up to 100 mm plate**
- **Fabrication up to 100 mm plate**
- **Drilling up to 65 mm plate**
- **Can fabricate Built-up, Box Beam and Pipe Trusses**



FABRICATION CAPABILITIES

SISCOL fabrication plants are strategically located in the steel city of Bhilai, Chhattisgarh. Our facilities comprise of:

- Two production units with total area of 32,000 sq mt and covered area of 15,000 sq mt
- Total monthly production capacity of 2,500 MT
- All critical processes are automated in the plant
- Certified ISO 9001, 14001, 18001 Unit



CNC Plasma Cutting



H-Beam Welding Station



Drilling and Oxy Fuel Cutting



Plate Processing



Beam Welding Line



Band Sawing Machine



Beam Straightening



Shot Blasting Line



Paint Booth





LOGISTICS & DELIVERY

SISCOL has developed a trained and dedicated team of logistic partners. They are carefully selected based on their overall capabilities that include vehicle fleet and support network. Quality of trailers and transport vehicles is checked prior to every dispatch to ensure timely delivery with minimum transit time. Customers are updated with the tracking of vehicles in transit through daily e-mails. This is facilitated by a regular interaction between the tracking office and the vehicle drivers with the help of mobile phones and vehicle tracking systems.

In the ever changing world of steel fabrication, SISCOL has learnt to adapt to change and is growing rapidly. This is all thanks to our foresight and pragmatic thinking. We have focused more on speed, quality and price which are the driving factors today. Our manufacturing is located in a manner where following factors have all been taken care of:

- Obtaining raw materials
- Manpower
- Vendor management
- Shipping of manufactured parts





INSTALLATION & PROJECT MANAGEMENT

SISCOL projects are operated by a team of dedicated professionals working at various locations all over India. SISCOL offers one-stop-shop for all projects. Each project is completed within time and cost targets using the highest quality and safety standards followed internationally.

A team of highly expert engineers is in place for overlooking erection engineering activities. We at SISCOL have the ability to provide analysis for a Stable Design & Installation Methodology. We strive to provide the most cost-effective design and Structure Erection Technique to our customers.

Turnkey project execution improves client-contractor coordination and interface with other site contractors, and allows SISCOL to be the preferred bidder for executing large projects as compared to any other company in the market.

Turnkey Project Management:

- Single-point contract responsibility
- Creation of presentations illustrating the erection concept for contractors and owners
- Centralized logistics control
- Centralized site management and project control
- Highest standards in quality. Trained quality teams look after and continuously monitor projects while they are under execution
- Safe working environment with the use of all Safety Tools and Methodology
- Zero-accident policy. SISCOL's stringent HSE regulations do not permit chances for accidents at our project sites. Trained safety teams operate pan India at all SISCOL project sites, ensuring on ground safety as well as safety in execution



A WIDE RANGE OF APPLICATIONS

In its pursuit for excellence in structural steel building solutions, SISCOL caters specially to large infrastructure projects using its vast experience in design, manufacturing and production of structural systems.

- **High-rise buildings**
- **Large and complex infrastructure projects**
- **World-class airport terminals**
- **Sea port infrastructure facilities**
- **Large industrial projects and industrial infrastructure**
- **Metro rail, elevated monorail terminals**
- **Skywalks, steel bridges and flyovers**
- **Structural steel buildings**





HIGHRISE BUILDINGS

Multi-storey buildings from 23 M to 150 M height (high-rise buildings) and Buildings above 150 M height (skyscrapers). High-rise steel structure can be made for any height as per project requirement and governing laws. Multi-storey Steel Framing System offers a bolted structure made off-site (in factory) using beam, joist, cold form deck slab and steel columns.



AIRPORTS

Very large clear span framing for Airport & Terminal Buildings can easily be made in steel, wherein the prime concern is functionally and aesthetics reflective of monumental scale



- Steel offers highest architectural flexibility in design and fabrication
- Faster construction with less disturbance at site
- Less construction time results in early occupancy and early return on investment
- 100-120 M clear span hangar for aircraft maintenance, storage and manufacturing areas using steel structures

SPORTS STADIUMS



SISCOL designs and delivers all types of steel structures in various options for stadiums, grand stands, ramp buildings, roof covers and other similar structure :

- Open air design with roof system
- Integration of elevators for easy movement for spectators
- Concourse designed all around the stadium, so that it makes it much easier, and safer to enter and leave the stadium
- Securing large structures for signs and advertising



BRIDGES & ROBS

Bridges, Flyovers and FOBs in steel allow flexibility to build large structures in a short period of time.



The durable long span structures are sleek, strong and have lighter foundation, longer life and improved life cycle performance besides having better seismic performance and being environment friendly.

PARKING LOTS

SISCOL Multi-level car parking system provides a quick and easy to build option using steel framing. Steel allows a lightweight, strong and slender structure, permitting large clear open floor spaces, with minimum



floor-to-floor heights and larger span for easy driving as well as automation. Multi-level steel parkings are cost effective & well ventilated. Very low consumption of energy takes place as day light is utilized throughout the day as walls are uncovered.

HOTELS & HOSPITALS

SISCOL steel structure is an ideal solution for hotel applications as in today's urban infrastructure there is space limitation for construction. Buildings can be built as per architectural design for optimized energy requirements such as natural cooling, solar gains or natural day light. Hotels incorporate a high level of building services which can be easily interfaced within our system; air conditioning systems ducts, flooring, electric power plants for essential facilities, fire protection system and all other mechanical and electric services.



OUR KEY PARTNERS

Adding Value to Steel

Shaping the city skyline, adding structural and aesthetic value to buildings, laying solid foundations that give people the confidence to build upon - these are the ideals that Yongnam has become synonymous with, as it grows from strength to strength, year after year.



Steel is increasingly the material of choice for the construction of buildings and temporary support for deep excavations. The advantages of using steel over conventional materials such as concrete for building construction are numerous. The higher speed of construction, superior material strength to volume ratio, flexibility in design and aesthetics are just some of the benefits of using steel.

With more than 40 years of experience in steel fabrication, Yongnam excels in adding value to steel construction. The Group's two production facilities in Singapore and Nusajaya, Johor, Malaysia have a total annual production capacity of 84,000 tonnes of steel fabrication. Yongnam utilizes the latest fabrication technologies and design innovation to offer solutions to its clients on a fast-track basis. Our modular strutting system continues to give the Group a strong competitive edge in meeting increasingly stringent design and project requirements in infrastructure and construction projects. With a traceability procedure that meets the requirements of the Singapore Building Construction Authority, our modular strutting system is the first to be certified by an independent auditor for reusability in earth retaining or stabilizing structures.

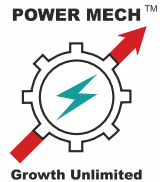
Yongnam's technical and value engineering solutions for steel fabrication and erection have resulted in increased productivity, improved yield and lower costs. Our in-house pool of experienced and qualified engineers, detailers, technicians, welders, riggers and fitters are consistently adding value to our clients' projects.

Structural Steelworks | Specialist Civil Engineering | Mechanical Engineering



Comprehensive capabilities

Power Mech Projects Limited is an engineering and construction company providing versatile and comprehensive service in power and infrastructure industries. The core activities of the company include three major business lines: Erection, Testing and Commissioning of BTG and BOP, Operation and Maintenance, renovation and modernization of power plants and civil works.



The company has undertaken projects of all types, sizes and in all environments in India and abroad which include Ultra Mega Power Projects, Super Critical Thermal Power Projects, Sub Critical Power Projects, Heat Recovery Steam Generator, Waste Heat Recovery Steam Generator, Circulating Fluidized Bed Combustion Steam Generator, Gas Turbine Generator, Hydro Electric Plants, maintenance, renovation, modernization and annual maintenance of running plants and complete civil works.

Today, Power Mech stands tall among contemporary players in the installation of power projects as a comprehensive service provider with over 7,500 direct and 30,000 indirect employees.

With a fleet of cranes and machines, the company is capable of handling over 4,00,000 MT annually and operating over 50 sites simultaneously.

The company has established subsidiary companies, Hydro Magus for undertaking hydro projects, Power Mech Industries with a workshop in Noida for undertaking manufacture and repair of BTG parts and a joint Venture Power Mech-CPNED Services (Hong Kong) Holding Company Limited for supply of original spares for Chinese make machines.

Erection of Structures | Construction Management



YOUR PARTNER FOR STEEL-BASED SOLUTIONS

- SISCOL is the only company in India to offer 'End-to-End' solutions right from design, engineering, fabrication to final installation.
- With complete access to the huge experience and capabilities of its business associates Yongnam, Singapore.
- Our alliance with Power Mech, India's Largest erection company, enables high quality site erection & installation of steel structures and associated civil work.
- Proximity of our fabrication facility in Bhilai to the Integrated Steel Plants, which are major sources of raw steel.
- Highly experienced Management Team of industry veterans with international experience.

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