

STEEL STRUCTURES & METAL BUILDINGS

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nerve of steel construction...

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## inside





JAY SHAH Director Access Architects

Much like Ariuna did with his quiver of arrows, one must inherently understand the tools available at one's disposal. Composite steel construction has been a relatively new building technology available in India for residential, commercial and hospitality buildings. We have always believed in the significance of understanding new techniques of design or construction to add value to the projects we plan and/or design. Having designed almost a dozen buildings using this methodology, it allows us to recognize the advantages of steel construction and use it correctly in a location like Navi Mumbai, where cost of construction must be minimal. To use it cost efficiently, one must plan and design for composite steel construction from inception.

## **RENAISSANCE** TECHNO PARK NAVI MUMBAI

The plot has been designed in a way that circulation is streamlined and there are only unidirectional roads along the perimeter of the plot. Pedestrian circulation is designed to be independent at the center of the plot and never intersects with any vehicular circulation. The pedestrian entry opens up into a plaza with shops and restaurants in it. There is also a double height grand lobby for the IT building. All amenities like the restaurants, gym, swimming pool, service apartments and guest rooms are designed and provided within the plot to help optimize utility by the employees. The project also aims at being selfsustainable with the use of solar energy and optimal building orientation for sun incidence.



Client: Rupa Infotech & Infrastructure Pvt. Ltd. Architect: Access Architects Consultant: LERA Consulting Structural Engineers Tonnage: 7500 MT Image Courtesy: Access Architects

## JAYESH HARIYANI Senior Principal & CMD, INI Group

The experience of working with steel was a learning curve for the entire project team. Steel being strong, but, relatively light and versatile, provided flexibility to achieve the desired form. The building was a combination of steel and concrete, and it did not have any of the typical floor plans. Thus, we faced the challenge of designing and detailing separately for each floor. The static and dynamic analysis of the structure, designing of steel members and columns were done using 3D ET ABS modelling under various loading conditions and their combinations. The relatively easy process of fabrication and mass production of steel members and their accurate detailing helped in arriving at uniform quality and also made it economical. Moreover, steel sections designed along with concrete made the project simpler and affordable in line with construction methods and construction cost of the project.

## SHIV NADAR UNIVERSITY SPORTS COMPLEX **GREATER NOIDA**

Client: Shiv Nadar Foundation Architect: INI Design Studio (Formerly Stantec Consulting) Structural Consultant: Parvati Consultants Tonnage: 220 MT Image Courtesy: INI Design Studio The design of the indoor sports complex was led by the vision of creating a versatile sporting facility comparable to international standards. The design inspiration came from the idea of creating a vibrant, active, flexible, sustainable, stout yet aesthetic structure that reflects the sporting activities it was intended to host. Thus, a rugged form, blended with bold colourful graphical treatment of varied spaces within it was envisioned. The essence of the design lies in the balance it achieves between structure and interior space brought by use of vivacious colours and bold graphics juxtaposed with the pronounced muscular form of the building. The choice of building material was critical to create a structure that was inspirational, vibrant and also sustainable from environmental, economic and structural aspects.

