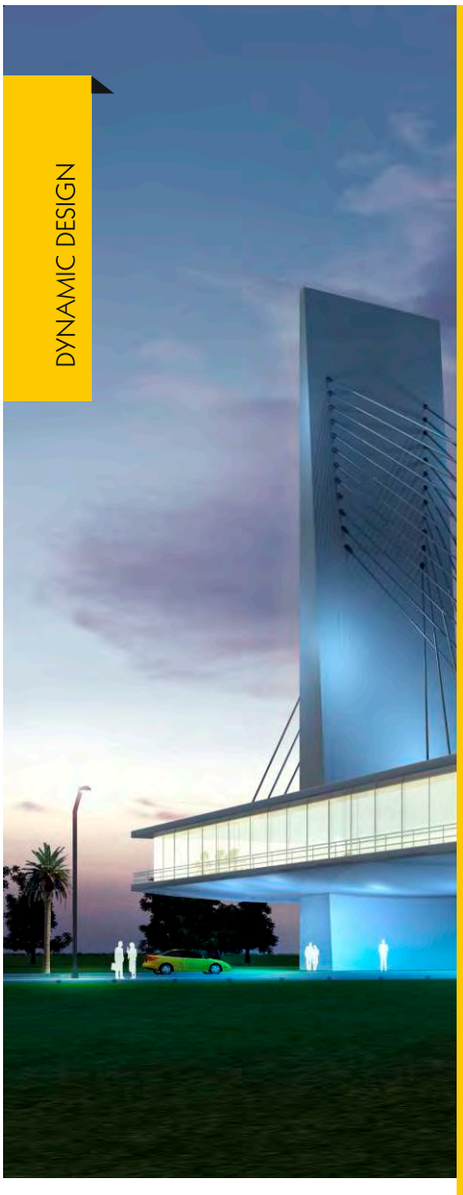
DYNAMIC DESIGN



STEEL STRUCTURES & METAL BUILDINGS

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JINDAL STEEL REGIONAL OFFICE, RAIGARH

The proposal brief was to design an iconic building that exploits steel's structural properties entailed with highly flexible and adaptive workplace. The client being one of India's largest steel producers, wanted an iconic building design that showcased the use and qualities of steel extensively. Steel was therefore an obvious choice of material to build with

a building that exploits steel's structural strength

The proposed project is an administrative office for a large steel manufacturing unit in central India. The main idea behind the building's design was to promote the use of steel construction by demonstrating the possibility of innovations in the use of steel. The vast expanse of the site (75000 sq m approx.) is flat and devoid of any characteristics. In addition, Raigarh lies in Zone 1 in the Indian geographic seismic divisions and experiences little or no seismic activity. This played a considerable role in allowing for a structure such as the one that finally evolved.

Project Brief

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Project Name	Typology	Location	Client
Jindal Steel Regional Office	**Corporate Offices**	**Raigarh**	**Jindal Steel & Power**

Architect	Built-up Area	Total Area	Software	Status
Morphogenesis, New Delhi	**75,000 sq ft**	**9 acres**	**CAD, 3D Max**	**Conceptual**

AR MANIT RASTOGI
Founder Partner, Morphogenesis

This building was always intended to be an iconic building for a steel manufacturer. We thought that the best approach was to push steel to its limit in a way, and also create an iconic form using recognizable bridge suspension bridge visual. Of course, there is an architectural reason for choosing that visual because bridges have always been objects of intrigue and the visual where there seem to almost float over the water and metaphorically connecting two worlds has always had a certain kind of imagination awakening effect. Due to these well-established facts, we chose the bridge as a source of inspiration to evolve the form in this particular project. What it interestingly also does is under the huge scoop of the office fluid also creates the huge shaded space which is very effective as well in this kind of very hot climate where most of the time the outdoors can only be enjoyed under the shading only

opportunity to build with steel that was produced on-site, and the architectural challenge in stretching the possibilities of steel construction to create a unique building. The design was a consequence of the site conditions, the low floor area requirement of the office

The Design

The building is sited in a formal forest, as a steel sculpture amidst a grid of trees, accentuating the juxtaposition of steel and nature, as an object within a natural setting. With ideal North-South orientation, a core housed within a structural steel mast accesses the main office space. The office plan is divided into an executive space on one side of the core and the general office area on the other.

A typical building section comprises of a verendeel girder suspended from a structural steel mast with steel tension strings. The stainless steel furniture is suspended from the structure above giving a neater floor space. All services are located within the trusses above, enabling greater flexibility on the floor-plate. Direct interface between structure and skin eliminates any sub-structure to maintain lightness. The weight is transferred from the furniture to the ceiling, to the structural steel mast and finally back to the ground through steel cables and trusses.

The verendeel girder is designed in a manner, to enable circulation across it to facilitate layout planning. Cubicles lined up along the center can be accessed through openings within the girder. The outer edge has a continuous deck running all around with a stainless steel railing at the edge. The interface between the outside and inside is through a continuous glass wall with fixed or sliding panels with stainless steel patch fittings. The lower level of the building, which is the ground plane, is a landscape of green and water bodies, which are reflected by the stainless steel underbelly above. The cafeteria and library are planned around a courtyard at a subterranean level as a common informal space.

Architectural USP

Suspended and light, the building takes on the origins of steel and iron. The design draws on its early uses in bridge construction to create a dynamic structure that appears both light and yet grounded at the same time. It creates an equivalent amount of shaded space allowing greater outdoor interaction for its users. With steel referencing bridge technology for a building, this project impresses in both size, structure and aesthetics. ■