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4th Anniversary SPECIAL

ME & STEEL

the steel professionals...

STEEL STRUCTURES & METAL BUILDINGS

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Developer's Modality | Architect's Creativity | Consultant's Proficiency | Manufacturer's Prowess
Supplier's Modernity | Fabricator's Adroitness | Detailer's Precision | Software Solution's Tranquility
Equipment's Veracity | Academician's Acumen | Expert's Vantage

the steel professionals!!!

EDITORIAL

This 2nd edition of 'ME & STEEL' inde
received an astonishing response from t
structural steel professionals, making
even bigger and better than the previo
one. The charismatic aura created by the
experts will truly leave an enrichi
experience upon the readers for a very lo
time. The issue is conceptualized in such
way such that professional architects a
engineers share one of their iconic projec
and decode in their own professior
dialect, how steel can indeed be
advantageous option in the modern d
construction.

Although it is going to take some time
the entire industry to realize the ri
dividends of steel, but we believe the time
now - the time to educate the industry w
the long term benefits of using structu
steel. And what better way to make the r
experts, with hands-on experience
working with steel, stand up and enlight
the industry through such illustrations
their excellent work. This is just a small st
taken in this regard, professedly, we hav
long voyage ahead, in unison.

Avneet Singh
Editor-in-Chief & Publisher

MX Business Me

STEEL STRUCTURES & METAL BUILDINGS

Editor-in-Chief & Publisher
AVNEET SINGH
avneet@mxmedia.in

Project Director
G. S. DADWAL
info@mxmedia.in

Assistant Editor
MAHESH MUDALIAR
editorial@mxmedia.in

Manager - Sales
SAPNA BALI
enquiry@mxmedia.in

Editorial Team
MADHVI TALEKAR
content@mxmedia.in

NESLENE RODRIGUEZ
edit@mxmedia.in

TEJAL MISTRY
reporter@mxmedia.in

Sales Team
SAMANTHA JAGDARE
ssmb@mxmedia.in

VISHAL BALI
sales@mxmedia.in

Design & Production
ANTONY KARLO
design@mxmedia.in

Administration
CAROL TEJUJA
admin@mxmedia.in

STEEL STRUCTURES & METAL BUILDINGS
Printed, published and owned by Avneet Singh.
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Chinchali Building, Chinchali Bunder Road, Malad (West), Mumbai - 400 0
Phone : 022 - 65525300-15
Direct : 022 - 3215 3231

Editor: Avneet Singh

SALES OFFICE: E-201, Abhishek Building, N. Dutta Road, Off Juhu-Verso
Link Road, Versova, Andheri (West), Mumbai - 400 053

AUSTRALIA OFFICE: 36/22, Ness Avenue, Dulwich Hill, New South Wa
2203, Australia | Phone: +61 430114147

ARCHITECT JAYESH HARIYANI, Senior Principal, Board of Directors, Stantec Consulting Pvt. Ltd., Ahmedabad

The design of the new stadium is both, functionally, and architecturally significant. The stadium's unique feature includes its two-way curvilinear roof and the tubular sections that are not merely an aesthetic feature, but, also structurally supports the lateral movement of the roof. Care was taken for the vertical supports for the roof so as to minimize the obstruction for spectators. Also, it was further streamlined for the wind movement. The tubular sections are arranged in a diagonal fashion to help spread structural loads, whereas, architecturally they generate a three-dimensional dynamic attern. This arrangement fulfils another function aside from supporting the structure above. It acts as a beacon in the night sky. These back lit tubular members increase the dramatic effect by adding depth and contrast to the façade creating an iconic statement.

EDEN GARDEN CRICKET STADIUM KOLKATA

Impending the 2011 Cricket World Cup, CAB decided to engage an expert international firm to renovate this hotchpotch stadium for renovation to the meet the standards laid down by ICC. Stantec, in association with VMS Engineering & Design Services (P) Ltd provided it's expertise for the upgradation of this iconic structure to a world class facility. The arena now includes new and improved exterior wall, more comfortable seats, better concession stands, roof structure clad with a new metal skin, superior patron amenities, better structured stairs, modernized entry and exit points and a topnotch club house with world class facilities. The stadium's seating capacity is now aptly geometrically retrofitted to provide spectators with the perfect view that gives them a superior cricket viewing experience.

ARCHITECT YATIN PATEL, Principal, DSP Design Associates Pvt Ltd, Mumbai

The steel exo-skeletal diagrid system uses an exterior frame comprised exclusively of diagonal members as the primary means of support. Such systems use less steel than conventionally framed tall buildings. This supports a sustainability-motivated move towards increased daylight effectiveness and LEEDTM credits. Where early conventionally framed office towers did not necessarily strive for a column free interior, this tower building strives to eliminate columns between the exterior structure and the core, and hence, the balance has been achieved successfully. The dramatically rising helix of the 40-storey building provides a distinctive landmark on the skyline. It is 525-feet (160-metres) tall steel diagrid structure rotates a 'bulged' square floor plate surrounded by four circular cores housing services and lifts, with the top floor offset 90 degrees from the base. The shift maximizes views for each of the floors, and houses a fine dining space spanning four floors on the top of the tower offering a panoramic view of the city. The twisted profile aims to reduce powerful wind forces on the towers diagrid structural system, which is employed to reduce construction costs and provide a column-free floor plate. The shape of the tower is not only aesthetically unique, but, it serves a structural function as well.

COMMERCIAL BUILDING PROJECT

160-metre commercial tower consists of 40 floors within an imposing helical form that rotates 90 degrees from base to peak. The primary idea behind the ption of the diagrid system was the recognition of the savings possible in the removal of (most of) the vertical columns, while achieve a form that is unique r the identity of the proposed building. DSP's endeavor towards designing this particular tower is to challenge the conventional approach in more than one , which is DSP's inherent philosophy while finding modern solutions to new architectural challenges. The structural system is unique with the cores spread side providing freedom of space planning, form and façade provides a wow effect as against a flat facade while at the same time illustrating a wind friendly gn approach and day lighting maximized. Adding to this argument for commercial viability was the case for a detached core/services function for a building roviding a clear floor plate where the limitations of a twisted volume meets practicality. Mechanical, electrical and plumbing systems are located in the four vertical peripheral cores, allowing straight vertical paths for these systems, thereby, introducing efficiencies in the construction and life-cycle costs.

ARCHITECT PREM NATH, Principal, Prem Nath & Associates, Mumbai

e at Prem Nath & Associates employ the benefit of steel in major parts of our prestigious project. We used steel in this project because of the aesthetic of steel; it has inherent beauty and the ease with which it blends with other materials, it helps to append drama and appeal to the composition, steel as e of the economical of architectural metals. At the same time, steel consent to create self standing dynamic form of architecture along with a fast track, thermore, we used it because steel is a 100 per cent recyclable. Steel enhances the constructions productivity and speed, the rapid design, fabrication rection cycle with steel will allow the building to finish sooner. Steel allows us a greater degree of expression and creativity in the design than any other struction material. It is very high in strength, simultaneously, it is an efficient material, no other material can provide this much strength and efficiency to gs. Also we used steel because it is the most recycled material on our planet. Ultimately, the most environmental friendly material is corrosion resistant nd durable, have high-recycled content and recapture rates, provide long service life and reduce resource use. Steel provides all of these benefits, and above all, we selected steel for Goa IT-Park because if it is properly maintained, it will last the life of the project.

A fully integrated global technology IT Park project with all infrastructure facilities for IT and software companies, the project is being developed at Goa IT Zone, as an intelligent techno-campus, with fully developed construction of about 2 million sq. ft. An impressive 'landmark' feature to create a greater 'sense of arrival', combined with pollution-free and eco-friendly environment with lush green milieu. The project shall be developed in a smart combination of structural steel, RCC and stainless steel finishing; and boasts of using various other eco-friendly construction materials. The entire complex shall be lushly developed with species selected on the basis of low maintainability.