



Newsletter of the Indian Association of Structural Engineers

www.iastructe.co.in June 2024

MESSAGE FROM THE PRESIDENT



Dear Friends,

Warm greetings from IAStructE.

I am very happy to present to you the June 2024 Newsletter. The association is regularly organising technical activities which help the structural engineering fraternity immensely. You may find details of such activities and publications in this newsletter and on our website. If you are not yet a member of IAStructE, kindly become a member to take advantage of the many benefits of the association.

It gives me immense pleasure to inform you that a new section has been added to the newsletter where association recognizes the achievements of its members. In this newsletter, Achievements of Dr. N. Subramanian, Mr. Rajiv V. Iyer and Dr. P. Pravin Kumar Venkat Rao have been included. Through this newsletter, I congratulate them for their respective recognitions.

In this newsletter, information related to the webinar on Post Installed Anchorage to Concrete-Draft Indian Code by Mr Shounak Mitra is included. Also, the news on lecture by Dr Lakshmy Parameswaran on insights into Cable aerodynamics is also included.

Please send your feedback on our activities and suggestions for further improvements

Best Regards,

Ramancharle

Prof. R. Pradeep Kumar President-IAStructE

FROM THE EDITOR'S DESK



Dear Fellow Members and Readers,

Once again, this newsletter brings you the latest updates on our organizational activities, both completed and upcoming. We are extremely proud of our members Prof. N. Subramanian, Mr. Rajiv, and Dr. Pravin for their remarkable

achievements. As previously mentioned, we would like to remind all our members to take advantage of our association with fib and avail themselves of the maximum benefits.

Please encourage, share, and support us by following our social media platforms.

Thanks and regards,

Prof. Visalakshi Talakokula

CONTENTS	
Webinar Organized	2
Forthcoming Events	2
Members Achievement	3
Article	4-5
IAStructE Library	5
Social Media Accounts	6
Call for Papers for the SED journal	6
Call for papers for CROSFALL	6
IAStructE Publications	7-8
IAStructE-fib Membership	9
Advertisement Tariff	10
ASE-IAStructE program	10
About IAStructE	11
Membership Benefits	11
How to become a member?	11
Advertisements	12-16

Events Organized:

Webinar on "Post Installed Anchorage to Concrete-Draft Indian Code"

The webinar on "Post Installed Anchorage to Concrete-Draft Indian Code" was organized on June 07, 2024. The speaker was Mr. Shounak Mitra, Head - Codes & Approvals (Fastening), Hilti (India) Pvt Ltd. Panelist were Mr. Aman Deep Garg, Managing Director, Creative Design Consultants & Engineers Pvt Ltd and Ms. Kamalika Kundu, Regional Codes and Approval Manager, Hilti Asia Pacific Pte Ltd. The Moderator was Prof. Visalakshi Talakokula, Vice President (South), IAStructE.

You tube Link: https://www.youtube.com/live/AkWwsrpXw1M?si=cQhuB8mFWkrzuaCf



Fig1. Glimpses of the webinar

Lecture on "Insights into Cable Aerodynamics"

An online lecture on Insights into Cable Aerodynamics was organized on June 27, 2024. The lecture was delivered by Dr. Lakshmy Parameswaran, Former Chief Scientist, CSIR-CRRI.

You tube Link: https://www.youtube.com/live/iPDGTqEPHHo?si=Bs-611GelRY3pK9w



Fig 2. Glimpses of the lecture

Forthcoming Event:

Event	Date	Venue
StructE NatCon 2024 "National Conference on Futuristic Structural Engineering" For more details and the dates about the submission of abstracts, full paper and registration process please visit the conference website: https://structenatcon.com/	08 – 10 November 2024	PHD House, New Delhi.
Online Refresher Course on "Planning, Design & Construction Aspects of Pre Engineered Steel Buildings". Registration Link: http://iastructe.co.in/online-refresher-course.php	July 27 th to August 31 st , 2024 every Saturday from 3:00 PM to 6:00 PM	Zoom Webinar

Members Achievement

1. **Dr. N. Subramanian**, Honorary Fellow, IAStructE has been honoured with the 2024 Edmund Friedman Professional Recognition Award for "exemplary conduct and service in the field of Civil Engineering, delivering vital and enduring projects, and for commitment to engineering education and helping young engineers from diverse backgrounds, and outstanding community leadership and philanthropy" by the American Society of Civil Engineers (ASCE)'s Committee on Advancing the Profession. The award will be presented at the next convention of ASCE to be held in Tampa, Florida on 8th October 2024.



On behalf of the Governing Council and members of IAStructE, we extend our heartfelt congratulations to Dr. N. Subramanian for this well-deserved achievement.

- **2.** On behalf of the Governing Council and members of IAStructE, we extend our heartfelt congratulations to Mr. Rajiv V. Iyer, Member, IAStructE for the following achievements.
 - Becoming a Member of the Nuclear Institute (UK).
 - Conferred the 2023 FIDIC Asia Pacific Award for Outstanding Contribution towards Development of Engineering Consultancy
 - Awarded the 2024 Institution of Civil Engineers (ICE) International Award for outstanding contribution to decarbonizing civil engineering



3. Dr. P. Pravin Kumar Venkat Rao, Mentor, IAStructE-IIIT Hyderabad Student Chapter & Assistant Professor in the Earthquake Engineering Research Centre, IIIT Hyderabad, has bagged an SGSITS National Award - 2023 for the Best Research by Young Teachers (Below 35 years) of Engineering Colleges from the Indian Society for Technical Education (ISTE), New Delhi. The award was instituted by the "Management of Shri G.S. Institute of Technology & Science, Indore in 1993". He received the national award for his contribution to

laboratory development for research in materials and advanced composites for structural retrofitting, publishing high-quality SCI-indexed journal papers and book chapters, fieldwork, innovations in teaching, development of course material, supervision of M. Tech. Projects, and coordinating research projects at the national level that are relevant to the Indian context with applications in industry/field.





He has been awarded a Cash Prize, a Brass/Copper Medallion, and a Certificate at the 53rd ISTE National Annual Convention on 22nd June 2024, hosted at the Kalinga Institute of Social Sciences (KISS) and supported by the Kalinga Institute of Industrial Technology (KIIT), Bhubaneswar, Odisha, India.

We at IAStructE, along with the Governing Council, would like to sincerely congratulate Dr. P. Pravin Kumar Venkat Rao on this well-earned accomplishment.



Article:

Demountable, Transportable Modular Stadium for T20 World Cup at New York - An example of Sustainable structural engineering

Alok Bhowmick

FNAE, IntPE(India), Past President, IAStructE and MD, B&S Engineering Consultants Pvt. Ltd

The Nassau Cricket Stadium, located at Eisenhower Park, on the outskirts of the New York city, has made its name in the history books recently. This was the first international cricket ground to be completely modular. This unique stadium was designed to be demountable, transportable and reusable. The stadium was erected in a record time of 106 days, to be functional and active for 10 days of spectacle, which was successfully executed. The spectacle began on 3rd June 2024 when the first match was played between Sri Lanka and South Africa and it ended on 12th June 2024 when the last match was played between India and USA. A total of 8 games of the first round of T20 matches was played at this venue, between 3rd June to 12th June 2024. Conceptualisation to construction of this stadium, designed to accommodate 35000 spectators, was an impressive structural engineering achievement, which demonstrated the important role played by structural engineers in sustainable development of the society.

As the modular stadium has already served its intended purpose, it is being dismantled. The modular parts of the stadium have been shipped to Las Vegas. The stands which were installed unfurled. However, the authorities decided to keep the drop-in world-class pitch intact along with the other ground infrastructure at the stadium venue. The Eisenhower Park, as it was known before, will be then opened for the local cricket clubs and fans as cricket looks to take the next step in the country. Photo 1 to 4 below shows the development of construction and erection work at site in a period between February to May 2024.



Photo-1: The site demarcated for the stadium in Eisenhower Park, in February 2024



Photo-3: Status of construction at the Park, in April 2024



Photo-2: Status of Construction at the Park in March 2024



Photo-4: Status of Construction at the Park in May 2024

Work at ground commenced in January 2024 and by mid-May 2024, the stadium was ready to host an international event. In a short period of 106 days, engineers have erected the international stadium in the city, hosted all the 8 matches and the work of demounting of all the infrastructure post event has began. This dismantling work is expected to be completed in six weeks' time. This new concept in venue development ensures that while the stadium's physical presence may not be there, its legacy will be everlasting.

For the benefit of readers, let me give some salient features of this stadium. A modular stadium such as this is made mostly of steel and aluminium, as opposed to the concrete structures at normal cricket venues. Such stadiums are erected in a short period, and are customizable. The Nassau stadium had a capacity to accommodate 34000 viewers.

Given the stadium's temporary use, its architect of this structure, Populous, which is a global design firm of repute, has designed this venue that repurposes stands from existing sports facilities. The playing field, with the rectangular pitch in the middle, was fashioned from special grass grown in Florida. The grandstands are borrowed materials most recently used at Las Vegas's Formula 1 race and professional golf events.

The concept of building temporary stadium represents an exemplary alternative to the concept of building permanent sports venues for mega events. Past experience worldwide has shown that many such stadiums lay dormant after a mega-event. Use of demountable structure and modular design enables a reduced CO₂ footprint in the long run, as it required fewer materials, created less waste, while also reducing construction time.

IAStructE Library:

IAStructE has set up a library at K-69 A, Basement Kalkaji, New Delhi. It has a collection of good technical books and journals related to civil & structural engineering. Members staying in the vicinity are encouraged to utilize this facility, and if you want to contribute your books and journal to the library you are always welcomed.



Fig 3 IAStructE Library



IAStructE Social Media accounts

Let's get "DIGITIZED"

Please follow us on all major media platforms. For joining us, below mentioned links to be pasted in browser. Let's join hands together to promote the profession of Civil Engineering.

- 1. on TWITTER as IAStructE: -https://twitter.com/iastructe
- 2. on Facebook as IAStructE: -https://www.facebook.com/IAStructE-100114022302316
- 3. **on LinkedIn: -**The group is defined as Indian Association of Structural Engineers-IAStructE https://www.linkedin.com/groups/6646248/
- 4. **on YouTube** as **IAStructE Webinar: -** Subscribe and press bell icon

https://www.youtube.com/channel/UCvv7ojXO9Dxq1WtP_yHZTKw

Call for papers for the theme-based issue of SED journal:

SED Editorial Board invites article contributions for the forthcoming issue of the Structural Engineering Digest on the following themes, which shall be published in e-book format.

July-September 2024 issue: Theme: Restoration & Strengthening of Historical and Heritage Structures; Guest Editor: Prof. Arun Menon

Interested professionals may send their full paper on any of the above issues along with their photograph and brief resume latest by June 15, 2024 or at the earliest convenience. Articles are invited from i) Members of IAStructE; ii) Specialists in the field even though they are not members of IAStructE.

Call for papers for CROSFALL:

CROSFALL is a newsletter created by Indian Association of Structural Engineers (IAStructE). Its purpose is to share lessons learnt from structural failures, near-misses and safety concerns. CROSFALL is greatly encouraged and inspired by CROSS (Confidential Reporting on Structural Safety), UK, which is a collaborative effort of three institutions (IStructE, ICE and IFE). **There is however no connection between CROSFALL-IAStructE and CROSS-UK**

CROSFALL Editorial Board invites reports for the forthcoming issues. Interested candidates can sent the reports about structural safety issues related to all types of structures (i.e. buildings, bridges, tunnels, industrial structures etc.) in the built environment. The reporting can be related to:

- Structural failures,
- Poor Design and Detailing, Lack of Seismic Safety in planning
- Safety concerns about high risk erection schemes at Site
- Safety concerns on Temporary Works
- Near misses, or observations relating to procedures followed at site, which may lead to failures or collapses.

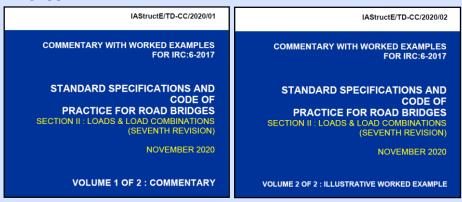
Reports do not have to be about current activities so long as they are relevant. Small scale events are equally important - they can be the precursors to more major failures. Report might relate to a specific experience or it could be based on a series of experiences indicating a trend. No concern is too small to be reported and conversely nothing is too large. Reports should aim to include information that will help others to learn from the safety issue identified.

To submit the report please go through the following link: www.iastructe.co.in/crosfall.php



IAStructE Publications:

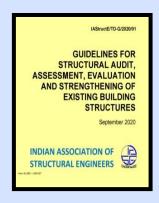
1. Commentary with Worked Examples for IRC: 6-2017: It is a document having commentary with worked example on IRC: 6-2017 (The code for Loads & Load Combinations for design of Highway Bridges). This commentary is in two separate volumes. Volume-1 pertains to the Commentary while Volume-2 pertains to Illustrative Worked Examples. It has 48 worked examples demonstrating application of various codal clauses.



The documents are available for sale @ Rs. 1200/- for Volume 1, and @ Rs. 800/- for Volume II. Members of IAStructE and IRC will be entitled for a discount of 10% on the price. Interested professionals who wish to purchase the commentary may kindly register with the following link or contact IAStructE Secretariat at iastructe@gmail.com

Registration link: http://iastructe.co.in/new-iastructe-publication.php.

2. Guidelines for Structural Audit, Assessment, Evaluation and Strengthening of Existing buildings Structures: This document will guide structural engineers in proper assessment of building structures before issuing structural stability certificate. These guidelines may be used by IAStructE members, all other structural engineers, house owners, housing society welfare associations, clients and corporation engineers for understanding structural audit of the private and public building structures. The Guideline focuses on the urgent need to strengthen risk resilience of buildings from any kind of risks due to earthquake and other hazards. It is hoped that this document will be useful to ensure that all structures across the country remain safe from any kind of disaster risk.

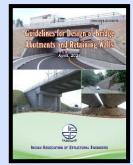


The price of this e-document is Rs 200/-. Interested professionals, who wish to obtain the soft version of the Guideline in pdf format, may register with the following link. Registration Link: http://iastructe.co.in/guidelines-for-structural-audit.php

- **3. Commentary on IS: 13920:** The commentary is available on www.iastructe.co.in under IAStructE Professional Documents. IAStructE member can access this document after login.
- **4. Commentary on IS: 1893 Part 1:** The commentary is available on www.iastructe.co.in under IAStructE Professional Documents. IAStructE member can access this document after login.



5. Guidelines for Design of Bridge Abutments and Retaining Walls: This document will assist practicing bridge and structural engineers in building confidence in the design of these structures, which offers tools for the design of economic and innovative retaining structures. The document is rich in theoretical explanations and draws on much experience of the authors. Worked examples further illustrate the application of the applicable codes and should promote better understanding.



The document is available for sale @ Rs. 1500/-. Interested professionals who wish to purchase this document may kindly contact IAStructE Secretariat at **iastructe@gmail.com**. Members of IAStructE will be entitled for a discount of 10% on the price.

6. Guideline for Selection and Design of Post-installed Anchors in Concrete Connections: In this document, only post-installed anchors are covered including their types, behaviour and working principles, failure modes, and basic design steps for non-seismic and seismic situations. A few illustrative design examples too are presented for better understanding of design methodology. This document is now available on www.iastructe.co.in under IAStructE Professional Documents. IAStructE member can access this document after login.





IAStructE is now a Statutory Member of fib:





Indian Association of Structural Engineers is now a Statutory Member of fib

We are delighted to announce that IAStructE has become the Statutory Member of *fib* and Indian National Member Group representing India in *fib* general assembly.

The *fib*, which is "The International Federation For Structural Concrete" (Fédération Internationale du béton in French), is a not-for-profit association formed by 41 national member groups, is spread over more than 100 countries. *fib* has approximately 2500 corporate and individual members. The *fib's* mission is to develop at an international level the study of scientific and practical matters capable of advancing the technical, economic, aesthetic and environmental performance of concrete construction.

As a statutory member of fib, IAStructE will represent India in the General Assembly and will enjoy the following benefits, which are exclusive to national member groups only:

- \rightarrow Voting rights in the general assembly of fib;
- Hosting rights for fib congresses and symposia;
- Events organised by IAStructE can be co-sponsored by the fib;
- Rights to nominate candidates for fib awards.

Members of IAStructE will enjoy the following benefits:

- Opportunity to become a part of fib technical committees and contribute to the fib Model Codes (published approximately every 10 years).
- Opportunity to become a part of the fib Task Groups and Commissions .
- Opportunity to be nominated for the fib awards thru' IAStructE.
- Access to all the bulletins published since the 2022 through IAStructE.
- 🔁 Eligible for 'subscribing' membership by paying discounted subscription fee.
- All current publications of *fib* can be purchased at discounted rates.

More information about the fib publications, bulletins, events, courses, and their proceedings can be obtained from https://www.fib-international.org

Fees for subscribing members: The discounted fees exclusively for the IAStructE members to become the "subscribing members" of fib shall be Rs 24,000.00 (CHF 250.0 approx.) as against CHF 465 for the Non-IAStructE members. However, non-members can also take advantage of the fib subscribing membership at a discounted fee after becoming members of IAStructE.

The procedure to get the subscribing membership of fib is as follows:

- 1. Interested members can remit the membership amount of Rs 24,000 (i.e. CHF 250) to IAStructE.
- 2. On the last day of every month, the contact details of those members who made the payment and want to be subscribing members will be sent to the fib.
- 3. The subscribing membership of fib will be valid for this calendar year up to December 31, 2024.



Advertisement Tariffs:

Structural Engineering Digest (being published in PDF format)

	Rates Per issue	Discounted rate at 20% for 4 consecutive issues	Advertisement Size
Full Page	Rs. 20,000/-+ 18% GST	Rs 64,000/- + 18% GST	9.5-inch x 7 inch

IAStructE Monthly Newsletter (being published in PDF format)

	Rates for advertisement	Advertisement Size
Full Page	Rs. 10,000 per issue, 10% rebate for quarterly, 20% rebate for half yearly and 30% rebate for yearly booking	9.5-inch x 7 inch
Half Page	Rs. 7,000/- + 18% GST per issue, 10% rebate for quarterly, 20% rebate for half yearly and 30% rebate for yearly booking.	4.75-inch x 7 inch
1/8th of a Page	Rs. Rs. 2,000/- + 18% GST per issue, 10% rebate for quarterly, 20% rebate for half-yearly, and 30% rebate for yearly bookings. (Only for IAStructE Members)	Standard size of Business Card

Accredited Structural Engineers (ASE - IAStructE):

The IAStructE program for Accreditation as Accredited Structural Engineers (ASE – IAStructE) is suitable for practicing structural engineers who have experience in the structural design field and have a good understanding of applicable design codes/standards in India.

This accreditation will help Structural Engineers in India to set a benchmark of proven professional & technical excellence and raise the levels of structural engineering practice in the Country. The entire program would be on the basis of a two-stage process consisting of an interview for the assessment of Initial Professional Development (IPD) followed by a written examination based on actual problem-solving. Applicants have to demonstrate their competence in the designated 12 key attributes on which they will be assessed during the interview. The applicant would then require to clear the examination by answering any single chosen question from the options given in the question paper with a minimum level of marks stipulated. Both stages are mandatory to clear the assessment process and thus to get recognition.

An Accredited Structural Engineer – IAStructE is someone who wishes to:

- validate their comprehensive experience and understanding of all types of structural engineering work and managerial capabilities
- demonstrate their competence on the basis of IPD and Continuous Professional Development activities in the field

Details of the application and assessment requirements, fees, and available dates can be consulted in the relevant fields given in the tabs below. They summarize the general application process, the assessment requirements, and the steps needed to qualify for the ASE-IAStructE accreditation.

The complete information about the entire process along with the application form and annexures can also be obtained from a booklet, which can be downloaded from the following link: https://www.iastructe.co.in/ase-iastructe-accreditation.php

This assessment process will be held bi-annually, being initiated in January & July respectively.

About IAStructE:

Indian Association of Structural Engineers (IAStructE) is the national apex body of structural engineers in India established with the objective to cater to the overall professional needs of structural engineers. The association has become the source of expertise and information concerning all issues that involve structural engineering and public safety within the built environment. It has no commercial aim or objective. IAStructE is purely a professional learned society with the prime objective of supporting and protecting the profession of structural engineering by upholding professional standards and acting as a mouthpiece for structural engineers. IAStructE endeavors to ensure that its members develop the necessary skill in structural engineering and work to the highest standards by maintaining a commitment to professional ethics and standards within structural engineering. IAStructE strives for continued technical excellence; advancing safety and innovation across the built environment. It also strives to make available to the Government, Public Sector and Private Sector - a credible source of well qualified and experienced Structural Engineers. A nationwide database of Structural Engineers has been compiled and is being constantly updated. IAStructE undertakes a broad range of technical activities which are aimed at information sharing and capacity building. The association provides opportunity for all the members to develop various skills in structural engineering and helps members to be at the forefront of structural engineering practice. Towards achievement of its aims and objectives, IAStructE is engaged in organizing the following: CPD Courses for Professionals at all levels Refresher Courses for Fresh Graduate Engineers, Student's orientation program, Seminars/Workshops, Technical Lectures by Experts, Technical Discussions on Contentious Issues. IAStructE is currently operating from four regional centers. These regional centres located in the Eastern, Western, Northern and Southern parts of the country effectively cater to the professional needs of members residing/practicing all over the country.

Membership Benefits:

Membership of IAStructE is a sought-after professional accreditation. Your membership of IAStructE can help you enhance your intellectual, academic, technical and professional status. It provides inter connectivity to the fellow professionals and the fraternity. Some of the benefits of membership is provided below:

- ★ Complimentary magazine subscription: All members (except Student Members) receive a complimentary subscription to the Institution's flagship publication 'Structural Engineering Digest' (SED). Published quarterly, each issue allows members to remain connected to the association through the provision of technical papers, Industry and Institution News, featured articles, Professional Guidance on everyday matters affecting the practicing structural engineers.
- ★ Access to the professional documents
- ★ Access to all Technical Lectures, organized every month, at no charge
- ★ Access to Technical Discussions held regularly
- ★ Access to the association's library (Including e-library)
- **★** Discounts in attending Seminars and Workshops organized by the association
- ★ Full on-line access to the current volume and entire e-archive of journal "Structural Engineering Digest (SED)", Refresher Course Materials, Technical Lectures, E-Newsletters and other Technical Resources of the Association.
- ★ Opportunity to network with professional structural engineers of eminence and to meet potential employers in the association.
- **★** Opportunities for professional development

How to become a member?

Membership form and details are available at https://www.iastructe.co.in/membership-grades.php; for more information and other details contact the Indian Association of Structural Engineers Secretariat

Indian Association of Structural Engineers K-69A, Basement, Kalkaji, New Delhi 110019 Tel: (011) 45794829; Email:iastructe@gmail.com; Website: www.iastructe.co.in



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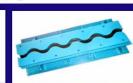
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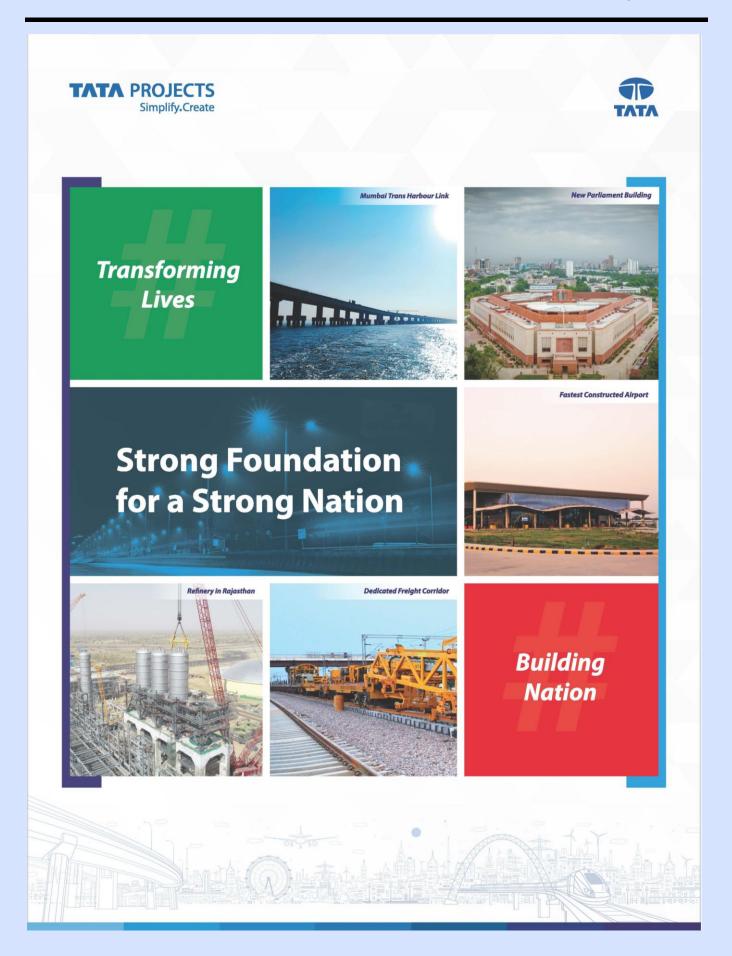
FACTORY:

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VSL India is fully owned subsidiary of VSL International providing its patented Post Tensioning and Stay Cable Systems and Specialised Package Construction services for Large Infrastructure Projects across India.

VSL India undertakes Specialist Package sub-contracts for Segmental Pre-cast bridges which includes Design, Supply & Operation of Launching Gantries for Span Erection, Supply of Casting moulds and Post Tensioning. VSL India also undertakes Supply & Installation of its Proprietary VSL SSI 2000 Stay cable System on Stay Cable Bridges and is one of the most widely used stay cable system in the country. In addition, VSL India undertakes Diaphragm Walls Construction for Underground Metros, Heavy Lifting Operations, Post-Tensioning on Various structures like Wind towers, Nuclear/LNG Tanks, Repair and Retrofitting works.

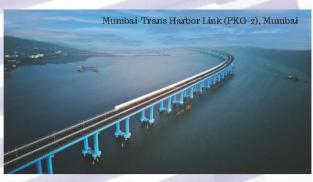


VSL India has successfully demonstrated its quality, competitiveness, speed & accuracy on various such package contracts executed on long segmental bridges like Bangalore Hosur Elevated Project-Bangalore, Devenahalli-Hebbal Elevated Highway-Bangalore & Hindon Elevated Road Project-Ghaziabad;Mumbai Trans Harbor Link (Package-2)-Mumbai; Gangapath Bridge-Patna to name a few.



Gangapath Bridge, Patna





VSL India is a leader in Cable Stay Supply & Installation and has successfully installed Stay Cables on iconic bridges like Bandra Worli Sea Link-Mumbai; Atal Setu-Jammu; The Veer Kunwar Singh Setu-Bihar; Karim Nagar Stay cable bridge-Telangana; Okha-Beyt Dwarka Bridge-Gujarat to name a few.



VSL India is presently engaged in construction of highly challenging projects like New MG-Setu Bridge-Patna; Anjikhad Stay Cable Bridge-Jammu; Mumbai Pune Missing Link Stay cable bridge-Mumbai; Chennai Peripheral Ring Road-Chennai; Chennai Port Connector Maduravoyal-Chennai; Diaphragm walls for CMRL-



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