



# INDIAN INSTITUTION OF BRIDGE ENGINEERS

DELHI STATE CENTRE

SUPPORTED BY

BORDER ROADS ORGANISATION



SEMINAR

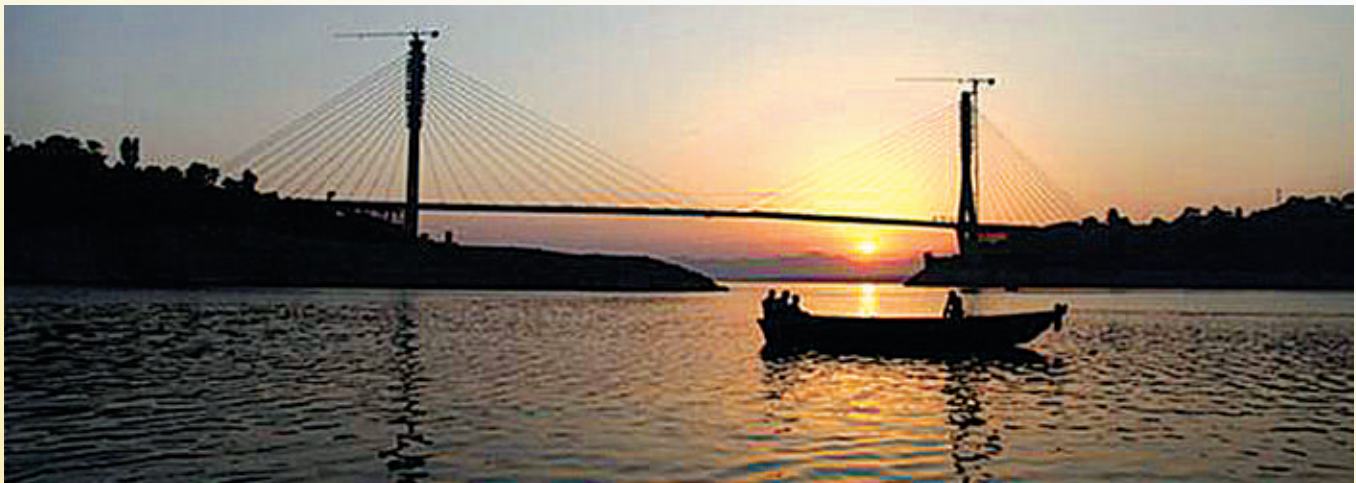
ON

## PLANNING, DESIGN AND CONSTRUCTION OF LONG SPAN BRIDGES

### INTRODUCTION

Construction of bridges across rivers/water bodies having widespread waterway, deep depth of flow, high velocity of current and those flowing in hilly areas has always been a challenging task for the fraternity of Engineers. Difficult terrain features accentuated by flash flood, deep gorge, boulder river bed, flash flood, difficulty approachability, limited working space, difficulty in diversion of flow, and inclement weather condition dares the best bridge engineer's planning and execution of bridges. These factors at times make it impossible to adopt conventional construction, span arrangement and technique and demand a high level of ingenuity of the Engineers to bridge such gaps. Construction of longer span bridges with reduced number of intermediate piers and thus, least obstruction to flow remains a very effective arrangement in such conditions. Besides least disturbances to the natural flow of water and to the river system their appealing aesthetics, reduced efforts in foundation and pier work make these bridges an obvious choice in such situations. Construction of foundation in bouldery river beds, deep rivers/sea, high velocity of flow remains an another tedious problem in such areas. The slow rate of sinking of well combined with associated problem of tilt and excessive efforts as needed for sinking, at times forces the executives to adopt pneumatic sinking. However, this technique also has a severe restriction beyond a certain depth. Various Organisations, which are primarily engaged in construction of road infrastructure in such areas, has undertaken construction of long span bridges to bridge such peculiar water gaps. Various kinds of bridges viz Cable-Stayed, Suspension, Extra-dose, Steel, Arch and Pre-stressed concrete bridges with span arrangements such as continuous, balanced cantilever and cantilever type have been followed at different sites depending upon the depth of gorge, flow conditions and terrain and geological conditions and restrictions in transportation of components. Various types of foundations i.e open, pile, single well and twin well have been constructed depending upon the site conditions.

Therefore, with a view to analyse the various challenges involved at each stage of planning and design of long span bridges across the water gaps having widespread waterways, deep gorge, fast flow of current and bouldery bed and develop proper understanding, it is proposed to have a two days deliberations on the subject by bringing experts of the field under a roof.



## **Call for Papers**

The themes and sub-themes for the Seminar are given below. We request experts, organisations, institutions and consultancy and construction firms to contribute the papers/case studies for the purpose as per their field of expertise.

- **Need for Long Span Bridges and issues related thereto**

- Challenges associated with construction of bridges in hilly areas/rivers having widespread waterway and deep depth of flow.
- Consideration in selection of long span bridges and span arrangement thereof.
- Special design consideration and codal provision for long span bridges.
- Geo-technical and geo-physical investigation required for such bridges.
- Advantages/cost-effectiveness of long span bridges.



- **Steel, Cable stayed, Extra-Dose and Suspension Bridges**

- Consideration in Planning and Design of Steel, Cable stayed, Extra-Dose and Suspension bridges and span arrangement thereof.
- Challenges associated with construction, techniques used for fabrication and erection including availability of skilled manpower.
- Case studies and associated challenges.

- **Balanced Cantilever, Cantilever Pre-stressed, Arch, Pedestrian Bridges**

- Planning and Design of Balanced Cantilever, Cantilever PSC, Arch and Pedestrian bridges.
- Various techniques used for construction and associated challenges.
- Case Studies.



- **Bridge Foundation**

- Type of foundation and suitability thereof for particular soil conditions.
- Difficulties faced in foundation work.
- Methods to address associated challenges.

- **Research/New Techniques/Materials**

Original papers on the themes and sub-themes as highlighted above are invited from the participants as per the following schedule. Authors are requested to send their technical paper (A4 size) along with brief CV and photographs. The papers will be published in the proceedings of the Seminar. Selected authors will be requested to make a Power Point Presentation of their paper during the Seminar. A time of 15 minutes will be allotted for the purpose:-

- (a) Abstract - 30 Jul 2018
- (b) Full paper - 15 Sep 2018

## **PROGRAMME**

Programme for conduct of seminar is as under:-

### **Day – 1 (01 Nov 2018)**

- 0900 hrs - 1000 hrs - Registration
- 1000 hrs - 1100 hrs - Inauguration



- 1100 hrs - 1130 hrs - Visit to Stalls
- 1130 hrs - 1200 hrs - **High Tea**
- 1200 hrs - 1300 hrs - Key Note Address
- 1300 hrs - 1400 hrs - Lunch
- 1400 hrs - 1530 hrs - **Technical Session-I**  
**Need for Long span Bridges & issues related thereto.**
- 1530 hrs – 1600 hrs - **Tea**
- 1600 hrs - 1730 hrs - **Technical Session-II**  
**Steel,Cable stayed, Extra-Dose and Suspension Bridges**

### **Day – 2 ( 02 Nov 2018)**

- 0930 hrs - 1100 hrs - **Technical Session-III**  
**Balanced Cantilever, Cantilever, Arch and Pedestrian Bridges.**
- 1100 hrs - 1130 hrs - **Tea**
- 1130 hrs - 1300 hrs - **Technical Session-IV**  
**Bridge Foundation**
- 1300 hrs - 1400 hrs - **Lunch**
- 1400 hrs - 1530 hrs - **Technical Session-V**  
**Research/New Techniques/Materials**
- 1530 hrs - 1600 hrs - **Tea**
- 1600 hrs - 1730 hrs - **Technical Session-VI**  
**Presentation by Firms**

### **WHO SHOULD ATTEND**

The Seminar will be of interest to Bridge Designers, Engineers, Consultants, Bridge and Highway Contractors, Research Institutes, Universities, Organizations & Associations actively involved in the Bridge Planning, Design and Construction, Suppliers of Products & Services for Bridge Construction.

### **VENUE**

Manekshaw Centre, Delhi Cantt. - A multi-utility, state of Art Expo and convention centre depicting rich ethos and glorious traditions of Indian Army, diverse and remarkable cultural heritage of our country.



### **REGISTRATION**

We request for whole hearted support from individuals, institutions, departments, organisations and companies for participation in the Seminar. The Registration Fee for the purpose is as under:-

- |   |              |
|---|--------------|
| (a) Individual Delegate                                   | - ₹ 5,000/-  |
| (b) Govt and Public Sector undertaking (with 3 delegates) | - ₹ 10,000/- |
| (c) Private firms & Companies (with 4 delegates)          | - ₹ 20,000/- |

### **EXHIBITION/STALL**

Table top exhibition facility will be provided to the interested firms/organizations at the venue of the Seminar. The exhibition will provide a scope to present the new technologies, methodology, materials and softwares. Participants will have sufficient time and opportunity to inspect the exhibition, and exhibitors will have an excellent opportunity of accessing a large number of potential buyers/decision makers. This opportunity will be allotted on first-come-first-serve basis. The exhibitors, if so, desired will also be given a time of 10 minutes for Power Point Presentation.

**Stall 3 m X 2 m for Exhibition of product for 2 days – Rs. 35,000/-**

## **ADVERTISEMENT OPPORTUNITIES**

A limited space is available for coloured advertisements on first-come-first-serve basis for the organizations involved in the concerned field in the proceedings volume of the seminar. The interested organizations are required to send the CD of the advertisement material in CorelDRAW software in A4 size along with payments as detailed below:

### **Inner Pages**

INR 10,000

### **2<sup>nd</sup> & 3<sup>rd</sup> Page**

INR 15,000

### **Back Page**

INR 25,000

## **SPONSORSHIP**

The Seminar will provide an excellent opportunity to various Central/State Government Organizations, Public Sector Undertakings, Industrial Organizations, Equipment Manufacturers, Entrepreneurs, Financial and Funding Institutions, Consulting and Construction Organizations to publicize themselves by being Platinum/Golden/Silver sponsors of the Seminar. The sponsorship fees payable and benefits are mentioned below. Interested organizations may communicate their willingness to the Seminar Secretariat.

Entitlement	Levels		
	Platinum	Golden	Silver
	INR 3.00 lacs	INR 2.00 lacs	INR 1.00 lacs
Logo on the Backdrop	✓	✓	✓
Complimentary Delegates	10	8	6
Audio Visual Presentation (in minutes)	15	10	10
Distribution of catalogues	✓	✓	✓
Advertisements (in pages)	Two	One	One
Table Top display unit (3 m x 2 m)	✓	✓	✓

## **CHAIRMAN ORGANISING COMMITTEE**

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## **CONTACT DETAILS**

In case of any clarifications on the subject, the following officials may be contacted.

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## **PAYMENTS**

All the payments shall be made by Cheque/draft in favour of "IIBE DSC Seminar-2005" at SBI Naraina, A/C No. 10932787708, IFSC Code SBIN0001703