

## **Refresher Course on**

**IS: 800-2007, Code of Practice for General  
Construction in Steel (Third Revision)**

**(Preliminary Level)**

**29 – 30 October 2010,**

**B-101, Department of Civil Engineering,  
Institute of Technology  
Nirma University, Ahmedabad**

**ORGANIZED BY**



**INSTITUTE FOR STEEL DEVELOPMENT & GROWTH,  
KOLKATA**

*Ispat Niketan, First Floor, 52/1A, Ballygunge Circular Road, Kolkata - 700019*

*Tel: 033 – 2461 – 4045, 4047 Fax: 033 – 2461 – 4048. [www.Steel-Insdag.org](http://www.Steel-Insdag.org)*

*E-mail: [insdag@rediffmail.com](mailto:insdag@rediffmail.com), [ins.steel@gmail.com](mailto:ins.steel@gmail.com)*

## ABOUT INSDAG

Institute for Steel Development and Growth (INSDAG) is a member based non profit making organization. The Institute primarily works towards the development of advanced design methodologies and technical marketing by expanding application of steel in different segments of industry, upgrading skills and know-how, creating awareness amongst potential users and communicating the benefits of steel vis-a-vis other competitive materials etc.

INSDAG has taken up the responsibility to facilitate revision of the code with active participation of IIT, Chennai, SERC, ANNA University and a number of Consultants / Fabricators / Prime Contractors etc.

## BRIEF DESCRIPTION

This code is the umbrella code for Structural Steel Design in India and forms the basics of Structural steel design. This code has incorporated the Limit State Method of Design, which is a paradigm shift from the working Stress method which was prevalent earlier. This revision was released by BIS on February 2008.

## WHO SHOULD ATTEND?

All those involved in structural Engineering Design like:

- Engineering Consultants, Structural Designers with steel
- Individuals engaged in Structural Engineering Design

## COURSE CONTENTS

- Limit State Design
- Local Buckling and Classification of Sections
- Design of Tension members
- Design of Compression members
- Design of members subjected to Bending (Restrained Beams & Unrestrained Beams)
- Members subjected to Combined Forces
- Connections- Welded & Bolted

## RESOURCE PERSONS

### Dr S R Satishkumar-IIT Madras-Chennai

Dr S.R.Satish Kumar obtained his **BE (Civil) from the College of Engineering, Pune**, India in 1987. After a brief stint in Design and Construction, he studied in **IIT Bombay** and obtained **MTech in Structural Engineering** in 1992. He completed his **Doctor of Engineering from Nagoya University, Japan** in 1996. He then worked at NKK Corporation, a multi-national steel industry as a research engineer and did pioneering work on the seismic design and pseudo-dynamic testing of steel bridge piers for the Japanese Ministry of Construction. He joined IIT Madras, Chennai in September 1998 and is **currently Professor and Head of the Structural Engineering Laboratory, Dept. of Civil Engineering, IIT Madras**. He has been teaching Design of Steel Structures, Structural Dynamics and Earthquake Resistant Design for under-graduate and post-graduate students. He has conducted a number of short term courses in these areas for university faculty and consultants. He has guided a number of MS and PhD students and has several publications in National and International journals and conferences. He has co-authored three volumes titled Teaching Resources for the Design of Steel Structures for university faculty and has contributed extensively to the revision of the Indian Code IS 800. Dr. Satish is actively involved in carrying out research in the area of seismic design and testing.

### Dr S Arul Jayachandran -IIT Madras-Chennai

Dr S Arul Jayachandran obtained his undergraduate degree from the **Thiagarajar College of Engineering, Madurai Kamaraj University in first class with distinction and a University rank**. After a brief stint at L&T Chennai, **he joined the Thiagarajar college of Engineering, Madurai as a faculty** and taught undergraduate students for three years. **He then joined IIT, Madras and obtained his M.S** in the year 1989 for his work on nonlinear stability of steel plated structures **and later his Ph.D** for his work on computational structural stability. Since 1989 he **had been working as a scientist in the Structural Engineering Research Centre, CSIR, Chennai** in the area of stability design of steel structural systems. **In 2005 he was selected as the Raman Fellow of CSIR, New Delhi and he was a Visiting Associate Professor at the Georgia Institute of Technology, Atlanta., USA for one year**. He is an Editorial board member of an International Journal called "International Journal of Advanced Steel Construction" published from Hong Kong. He has published over forty papers in the international and national journals and many conferences. He has co-ordinated advanced courses for engineers and chaired several sessions in conferences. **He was awarded the CSIR Technology Prize in the year 1999** as a member of the SERC team for contribution to the area of CAD and advanced analysis of structural systems. **He was awarded Dr.Ramaiah prize for the best International Journal publication in the year 2001 and certificate of merit in 2008**. He has been serving as a member of Bureau of Indian Standards committee for the revision of several national codes such as IS:800 and five other codes of practice dealing with steel structures. He has been elected as life educator member of American Institute of Steel Construction. He is life member of Institution of Engineers, Indian Institute of Welding, Indian Institute of Non-destructive testing, Indian Institute of metals and Computer Society of India.

Presently he is with IIT Madras as the Associate Professor in the Structural Engineering Laboratory.

### Dr Urmil Dave-Institute of Technology, Nirma University, Ahmedabad

Dr Urmil V Dave has obtained **B.E. in Civil Engineering, M.E. in Structural Engineering from Sardar Patel University, Gujarat** and has obtained his **PhD from IIT Bombay**. Presently working as a **Senior Associate Professor, Department of Civil Engineering at Institute of Technology, Nirma University, Ahmedabad**, he has rich experience of teaching, research and consultancy of more than 15 years. His current areas of research include enhancing performance and life cycle of concrete structures and analysis & design of steel structures. He has published papers in national and international journals and conferences. He has also **co-authored a book on "Mechanics of Solids"**. Actively involved in guiding PhD students and has also guided more than 15 students for their Master's projects. He has completed research projects from Institution of Engineers (India) and Gujarat Council of Science & Technology.

### M M Ghosh - Senior Manager, INSDAG and Course Coordinator

MANAS MOHON GHOSH obtained his **BE in Civil Engineering from Jadavpur University, Kolkata** in 1986. He joined Simon Carves India Limited (a premier Turnkey Contractors and Engineering Consultancy firm) in the Structural Engineering design department. There he was involved in designing Steel structures for steel plants and chemical plants. Simultaneously he embarked on further studies and completed his **Masters in Business Administration (MBA)** in Finance from the same university in 1990 in their 3 years part time course. He then joined Nicco Corporation Limited (Project division) in 1991. He then shifted to **Tata Korf Engineering Services Limited (a company promoted by Tata Steel)** in mid 1993. **He joined INSDAG in December 2002 and is presently "in charge" of the training department** where he organizes all Refresher Courses and Short Term Training Programmes.

Mr. Ghosh is a Chartered Engineer and a Member of The Institute of Engineers (India).

**Course Fee: Rs 5000/- per participant (Non Residential)**

### **Registration Procedure**

Intending participants may apply to the course coordinator as per enclosed format for registration along with a Demand Draft of Rs.5000/- on any bank payable at Kolkata in favour of "Institute For Steel Development & Growth."

***The same may be handed over to Dr Urmil Dave, Institute of Technology, Nirma University, Ahmedabad Mob No 09427022244***

### **Course Coordinator**

MR. M. M. GHOSH

### **Senior Manager (C&S)**

INSTITUTE OF STEEL DEVELOPMENT & GROWTH

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**Tel: 033 – 2461 – 4045, 4047 Fax: 033 – 2461 – 4048 Mobile – 09748482618**

***E-mail: [insdag@rediffmail.com](mailto:insdag@rediffmail.com), [ins.steel@gmail.com](mailto:ins.steel@gmail.com)***

**Last date of receipt of registration: 20<sup>th</sup> October 2010**

**Participants are requested to carry their copy of IS 800: 2007. The code will NOT be distributed in the programme.**

## REGISTRATION FORM

*Two day Refresher Course on*

IS:800 - 2007 Code of Practice for General Construction in Steel, 3rd Revision  
(29<sup>th</sup>-307<sup>th</sup> OCTOBER 2010)

CONDUCTED BY



INSDAG,  
KOLKATA

1. Name (in CAPS): \_\_\_\_\_
2. Designation: \_\_\_\_\_
3. Organization: \_\_\_\_\_  
\_\_\_\_\_
4. Sex (Please ✓): Male                  Female
5. Contact Address: \_\_\_\_\_ PIN: \_\_\_\_\_  
Ph: \_\_\_\_\_ Mob: \_\_\_\_\_ E-mail: \_\_\_\_\_
6. Details of Bank Draft: \_\_\_\_\_  
\_\_\_\_\_
7. Amount: Rs

Date:

Signature of the applicant

Date: 29-30 Oct 2010 Time: 10.00 - 16.30 hrs Venue: B 101 Nirma University, Ahmedabad

**SCHEDULE: DAY 1**

09.00 - 10.00	:	<b>Registration</b> _____
10.00 - 10.15	:	<b>Introduction &amp; Overview of IS-800</b> -M M Ghosh-INS DAG
10.15 - 11.00	:	<b>Limit State Design</b> -M M Ghosh-INS DAG
11.00 - 11.15	:	<b>Tea Break</b> _____
11.15 - 12.15	:	<b>Design of Tension members with Worked out examples</b> -Dr Urmil Dave-Sr. Associate Professor, Nirma University
12.15 - 13.00	:	<b>Local Buckling and Classification of Sections</b> -Dr S R Satishkumar -IIT Madras
13.00 - 14.00	:	<b>Lunch</b> _____
14.00 - 15.00	:	<b>Design of Compression members with Worked out examples</b> -Dr S R Satishkumar -IIT Madras
15.00 - 15.15	:	<b>Tea Break</b> _____
15.15 - 16.30	:	<b>Design of members subjected to Bending (Restrained Beams)</b> -Dr S R Satishkumar -IIT Madras

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**SCHEDULE: DAY 2**

10.00 - 11.00	:	<b>Design of members subjected to Bending - (Unrestrained Beams)</b> -Dr S R Satishkumar -IIT Madras
11.00 - 11.15	:	<b>Tea Break</b> _____
11.15 - 12.00	:	<b>Design of members subjected to Bending-Worked out examples</b> -Dr S R Satishkumar -IIT Madras
12.00 - 13.00	:	<b>Design of members subjected to Combined Forces</b> - Theory with Worked out examples -Dr S Arul Jayachandran-IIT Madras
13.00 - 13.30	:	<b>Lunch</b> _____
13.30 - 14.15	:	<b>Definitions of some key words</b> -Dr S Arul Jayachandran-IIT Madras
14.15 - 15.15	:	<b>Connections-Bolted with worked out examples</b> -Dr S Arul Jayachandran-IIT Madras
15.15 - 15.30	:	<b>Tea Break</b> _____
15.30 -16.30	:	<b>Connections- Welded with worked out examples</b> -Dr S Arul Jayachandran-IIT Madras

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