

Announcement for
STUDENT AWARD COMPETITION (2004-2005)
FOR THE BEST INNOVATIVE USE OF STEEL IN ARCHITECTURE

THE INSTITUTE

The Institute for Steel Development & Growth (INSDAG) is a non-profit making organization established at Kolkata by the Govt. of India and the major steel producers of the country. The Institute primarily works towards creating awareness on advantages and advances in steel application among users and potential users, providing efficient steel-usage technology /design aids / teaching aids, upgrading skills/ know-how and disseminating steel related information/ database, expanding application of steel in different segments of industry, establishing intimate industry-university interface and communicating the benefits of steel vis -à-vis other competitive materials, etc. To promote the development and growth of steel usage in India, the Institute has identified various projects / thrust areas under the direction of its Executive Council.

THE MISSION

To accomplish the goals and objectives, the Institute has carved its mission as:

**To work in unison
with all the
stakeholders
in the Steel Industry
so as to evolve
ways & means for
more efficient use
of steel and provide
optimum value
to the customer**

THE COMPETITION

To create interest among the students of Architecture in using steel as a medium of their architectural expression and in exploiting numerous advantages of structural steel as a material of construction, the Institute organises a "*National Student Award Competition for the Best Innovative use of Steel in Architecture*" as a part of its Industry-University interface. Starting from the year 1999-2000, the Institute is arranging an interesting and exciting competition every year for the students of Architecture all over India with a view **to recognizing and rewarding the talents of budding Young Architects of tomorrow for "Excellence in Steel Architecture"**

THE OBJECTIVE

The main objective of the competition is to create awareness among the students on high potential of structural steel (as a material of construction), to expose them to the world of steel in depth and also to stretch their minds to make use of the unique properties of steel as a building material.

THE BRIEF & THE THEME:

The **Theme** of the competition is a *world-class International Airport Terminal Building at Vishakhapatnam, Andhra Pradesh*. The **Brief** of the competition for the **Architecture Competition for the Year 2004-2005** (i.e **6th year of the Competition**) is available in this booklet.

THE PRIZE

1st Prize	: Rs.15,000/-	+ Scroll of Honour
2nd Prize (2 nos.)	: Each Rs.10,000/-	+ Scroll of Honour
3rd Prize (2 nos.)	: Each Rs. 5000/-	+ Scroll of Honour

Further all submitted Entries will receive Participation Certificates and one INSDAG's Publication on Album on the Architecture Competition.

ELIGIBILITY

The "**Competition**" is open to all the **first year to fifth year UG & PG Architecture Students** (for UG students, individual participant / team of maximum 4 students in the team & for PG students only one PG student either individually or in a team with maxm. three UG students) from any AICTE approved University / Schools of Architecture in India. Each participating student is required to fill in the enclosed Intention form (xerox copies are acceptable) for participation and student membership form and send both these to INSDAG to get the opportunity to participate in this National Level High Profile Competition. Students who have already been enrolled as members of the Institute would mention their membership number only and they need not to pay any further membership fees.

Avail Student Membership of INSDAG

Pay one-time only Rs. 200/- for your full period of student life and get INSDAG regular publications free every year for the above period and get a free copy of INSDAG's Album on the Architecture Competition.

the proposals, as per the criteria formulated by the Committee. (* Depending on actual nos. of Entries received at the Zone)

THE SELECTION

Four Zonal Selection Committees (one each for East, West, North and South Zone) consisting of renowned Architects and Faculties will make the Zonal Ranking (and Screening) of Entries at each Zone. In this **Zonal Round**, a max. of 16 (sixteen) best Entries will be selected (about 4* numbers from each Zone) based on the Zonal Ranking of

The participants of 16 top scoring entries will be duly informed and called to Kolkata to appear before the **Central Selection Committee** for the **Final Round** of Competition, display and presentation. The approximate timing of the same is around mid **July 2005**. However, the detailed programme will be intimated later on. The top five Entries will receive the **Awards**.

ENTRIES / APPLICATIONS

The **last date of receiving Applications/Entries** for the Zonal Round of Competition is **31st March 2005**. The Entries should be directly sent to the respective **Zonal Centres** at the following addresses with intimation to INSDAG, Kolkata. **Notice of Intent** for participation shall be sent to INSDAG directly with intimation to the respective Zonal Coordinator latest by **31st January 2005**.

Request to Principals, Directors and HODs of all the Architectural Institutes, [redacted]
This is a prestigious National Level Competition
You are requested to encourage & assign the Brief as a project / sessional work to the students [redacted]

Intimation to INSDAG shall be made to the following address:

Director General
Institute for Steel Development & Growth
ISPAT NIKETAN, 1st Floor,
52/1A, Ballygunge Circular Road,
Kolkata-700 019
Phone 033-2461-4045/47; 24860855/58/59
Email: insdag@cal2.vsnl.net.in
Fax: 033-2461-4048/2486 1013

NORTH ZONE

Prof. M N Joglekar , Director
Aayojan School of Architecture &
The Zonal Coordinator (North Zone)
INSDAG Award Competition
ISI – 4, Institutional Block R,
R II CO Industrial Area, Sitapur, Goner Road
Near Mahatma Gandhi Hospital
Jaipur – 302 022, Rajasthan

SOUTH ZONE

Prof. R P Deshmukh , H.O.D.
Department of Architecture &
Manipal Institute of Technology &
The Zonal Coordinator (South Zone)
INSDAG Award Competition
Manipal – 576 119, Karnataka

EAST ZONE

Prof. (Dr.) Manju halder, H.O.D.
Department of Architecture
Bengal Engineering College &
The Zonal Coordinator (East Zone)
INSDAG Award Competition
Howrah – 711 103

WEST ZONE

Prof. Manoj Parmer
Department of Architecture
Kamla Raheja Vidyanidhi Institute for
Architecture & Environmental Studies &
The Zonal Coordinator (West Zone)
INSDAG Award Competition
Vidyanidhi Marg, Juhu Scheme, Mumbai 400 032

SUBMISSION

The participants are invited to send their entries / application containing the following (given as guidelines only):

- ? Site layout drawing (A0/A1 Size) with Landscape Planning etc (Recommended scale 1: 600 / 1: 1000)
- ? Detailed Architectural Drawings showing Floor Plans, Elevations, Sectional views, blow-up details etc highlighting the application of steel. (Recommended scale 1:100, 1:10)
- ? Perspective View of the buildings/structures
- ✗ All other drawings shall be of A1 size and in printed form complete with Nameplates etc. (floppies will not be accepted)
- ? A brief Write-up (3000 words maximum, duly typed on A4 size paper) on the work (consisting of the Summary, Introduction /Background, Considerations / Assumptions, Proposal Description, Highlights/ Special features, Innovativeness in Approach and Steel Application etc.)

- ? A brief Resume of participant(s) containing name, address, phone / fax / e-mail number, name of University / College, year of study, roll numbers and registration numbers, and 2 copies of recent passport-size attested photographs etc.
- ? A certification from the HOD of his / her Institution on office pad duly approving all the above information produced by the student(s) / applicant(s) and also certifying the originality of the work under the office seal / stamp.
- ? Soft copies of drawings/ reports/ presentation work may be submitted in CD form in addition to the hard copies.

OTHER RULES

1. The participating students are required to enroll themselves as student member of INSDAG before submission of entries.
2. There is no limitation of the numbers of participating groups from any Institution.
3. Originality of work is essential and the application will be disqualified, if found otherwise.
4. The decision of the Expert Committee is final and binding. Canvassing in any kind will lead to disqualification.
5. Outstation candidates appearing for the final round of competition in Kolkata will be reimbursed to-and-fro second class sleeper Rail Fare by the shortest route on production of proof of travel. Accommodation in Guest House/Hostel will be considered depending upon availability. A maximum of two numbers of candidates shall be considered per Team/ Entry for this purpose.
6. Family members/ relatives of Selection Committee/ INSDAG Staff are debarred from taking part in this competition.
7. All the entries / proposals received by INSDAG at all stages of the above competition shall be treated as property of INSDAG. Moreover, INSDAG will not take any responsibility in case of missing of any documents /communications (if any) from any side while in transit

THE BRIEF

India has been always a country of interest to the tourists all over the world. Due to the globalisation and to improve the forex status, Govt. of India has given a lot of impetus to the Travel & Tourism sectors to grow up to the international standard.

Therefore, to welcome the foreign tourists and to provide them with all modern facilities of world standard, the Ministry of Aviation, Govt. of India, has decided to set up a good number of International Airports all over India.

The Theme of this competition is one of such live project – International Airport at Vishakhapatnam, Andhra Pradesh. The students are required to design innovatively the world-class Terminal Building of this Airport, using Steel as a medium of architectural expressions.

THE BASIC SCHEMES OF THE TERMINAL BUILDING ARE AS FOLLOWS:

- ? The layout of the building should be in accordance with modern airline terminal requirements as in Changi, Kuala Lumpur and Hong Kong etc. keeping conformity with the similar climatic conditions to India.
- ? The structural scheme of the Terminal Building is to be suitable for coastal wind at Andhra Pradesh.
- ? The site is located at the Zone II of Earthquake as per IS 1893:2002. Hence, the scheme needs to be compatible to the suitable technical requirements.
- ? The Site Plan & Key Plan with salient features of the proposed Terminal Building are furnished along with this Brochure.

GUIDELINES

1.0 The **Implementation Committee** has suggested the following:

- a. *The proposed Terminal Building will be of international standards in its features, quality, aesthetics and visual impact.*
- b. *The Architects are free to evolve the Steel Structure having any suitable shape satisfying the basic dimensions furnished in the Site Plan. Larger column free areas inside the Terminal Building and other service facilities are desirable.*
- c. **INSDAG confines the competition problem within the architectural design of the Terminal Building only with innovative use of steel in the best possible way in roof and other structures along with the associated services and facilities required for such complex including:**
 - ? Market Complex
 - ? Rest room & Hotel facilities
 - ? Links with city such as taxi, car rental, light transit railway, buses, transit buses etc.
 - ? Restaurants
 - ? Viewing Galleries
 - ? Hotel booking etc.

2.0 **INSDAG** desires that the Architectural scheme should take full advantage of steel intensive construction in line with such Complex and other buildings in the developed countries. Accordingly the followings may be noted while working out the schemes:

- a. **Use of steel to the maximum extent in structural framing/ flooring.**
- b. **Use of steel elements in roofing, cladding, fascia, stairs and other areas as far as possible along with other building materials.**
- c. **Use of Composite Structure in the building is desirable because there is no intention to exclude RCC elements in some locations such as slabs, foundations etc.**

3.0 More emphasis will be laid on design process and conception of innovative steel structures of various interesting forms tempered with the practicality of putting the concept into reality along with Structural Stability.

4.0 The Complex should be suitably conceived for safety.

5.0 Fire protection will be provided by intumescent coating/ gypsum boards/ vermiculite plastering and/ or sprinkler system. Encasement with concrete may not be adopted. High performance paints for the steel structures will be adopted for ensuring a maintenance free period of 25 years.

DESIRED CONSTRUCTION TIME

The Authority desires to complete the construction of the building by August 2006.

CODES AND REFERENCES

1. Use of Internet and recent publications for obtaining information on similar Complex worldwide is suggested. However direct copying is prohibited.

(Also refer rules under submission criteria in the announcement section)
2. Detailed structural design and cost estimation are outside the scope of the competition.

However the following codes may be noted for reference purpose:

- ? IS:800, IS:806, IS:875, IS:1161, IS:1893, IS:4923, IS:9595, IS:11384 – the latest versions of these codes are to be referred.
- ? National Building Code and other Guide Books.
- ? The candidates are free to refer suitable Indian/ British or other foreign codes as applicable.
- ? The INSDAG Design Competition for students of Architecture – A

compilation of the outstanding designs for the competitions held 1999-2002 – INSDAG Publication No. INS/PUB/053.

- ? Reference manual for Structural Engineers – INSDAG Publication No. INS/PUB/003.
- ? Corrosion Protection of Structural Steels used in Buildings and Bridges – INSDAG Publication No. INS/PUB/005.
- ? The Fire Resistance of Composite Floors with Steel Decking (second edition) – INSDAG Publication No. INS/PUB/026.
- ? Design for Structural Fire Safety : A Handbook for Architects & Engineers – INSDAG Publication No. INS/PUB/033.
- ? B+G+20 storeyed Residential Building with steel-concrete Composite Option – INSDAG Publication No. INS/PUB/047.
- ? G+3 & G+6 storeyed Residential Buildings with steel-concrete Composite Option – INSDAG Publication No. INS/PUB/048

Steel Elements

All available **Steel Elements** may be used for the above purpose. These include:

- ? Rolled Sections including Beam Sections, Channel Sections and Angle Sections etc.
- ? Fabricated / Built-up Sections
- ? Tubular Sections
- ? Rectangular and Square Hollow Sections
- ? Plates and Flats, Rounds and Squares
- ? Wire Ropes
- ? Cold Formed Steel
- ? Corrugated /Plain/ Profiled Sheet
- ? Colour Coated/ Plastic Coated/Galvanized Sheet
- ? Stainless Steel Sheet and Sections
- ? High Tensile Steel, Weather Resistant Steel etc

OTHER POINTS

Except for the guidelines mentioned above, suitable rational assumptions may be made to complete the

work. However, all the considerations must be clearly specified in the write-up.

SUBMISSION

Regarding submission criteria, please refer to **The Announcement Part** available with this booklet.

INSDAG PUBLICATIONS

- ? **Directory of Steel Supply Chain**
- ? **Buyer's Manual**
- ? **Reference Manual for Structural Engineers**
- ? **Hand Book on Composite Construction – Bridges and Flyovers**
- ? **Corrosion Protection of Structural Steel (Buildings / Bridges)**
- ? **Composite Column Design to Eurocode 4**
- ? **Building Design using Cold Formed Steel sections: An Architect's Guide**
- ? **Design of Composite Trusses**
- ? **Design of Composite Slabs and Beams with steel decking**
- ? **Steelwork Design guide to BS 5950: Part 1: 1990 Volume 2: Worked examples (Revised Edition)**
- ? **Design of Fabricated Composite Beams in buildings**
- ? **Commentary on BS 5400: Part 3: 2000 – Code of Practice for the Design of Steel bridges**
- ? **Introduction to Steelwork Design to BS 5950: Part 1**
- ? **Architects' guide to Stainless Steel**
- ? **Building Design using Cold Formed steel sections: construction Detailing and Practice**
- ? **Recent Case Studies in India – Pre engineered Buildings and Space Frames**
- ? **Life Cycle Cost Assessment of Typical Urban Flyover**
- ? **Welding Guide for Structural Steel**
- ? **Handbook on Composite Construction (Multistorey Building)**
- ? **Economics of Two Steel Framed Urban Commercial Buildings**
- ? **Design of Structural Steelwork – Lattice framed Industrial Buildings**
- ? **Fatigue Behaviour of Welded Hollow Section Joints**
- ? **The Fire Resistance of Composite Floors with Steel decking (Second Edition)**
- ? **Design of Members Subject to Combined Bending and Torsion**

- ? Steelwork Design Guide to BS 5950 – Vol 4 – Essential data for designers
- ? Design guide on the Vibration of Floors
- ? Commentary on BS 5950 : Part 3 : Section 3.1 ‘Composite Beams’
- ? Design guide for Simply Supported Composite Bridges
- ? Good Practice in Composite Floor Construction
- ? Structural Fire Safety: A Handbook for Architects and Engineers
- ? Design of Composite Truss for Building
- ? Life Cycle Cost on Reinforced Concrete Pavement Road
- ? Guidebook on Steel Doors and Windows for Domestic use
- ? Building Design using Cold Formed Steel sections: Fire Protection
- ? Joints in Steel Construction : Composite Connections
- ? Design Guide for Composite Highway Bridges (Steel Bridges)
- ? Design Guide for Composite Highway Bridges: Worked examples
- ? Guidance notes on Best Practice in Steel Bridge Construction
- ? Fire Protection for Structural Steel in buildings (Revised Second Edition)
- ? Design Guide for Composite Box Girder Bridges
- ? Moment Connections in Composite Construction – Interim guidance for End-Plate Connections
- ? Connection Design and Detailing (Engineering basis documents)
- ? Building Design using Cold Formed Steels sections
- ? (B+G+20) Storied Residential Building with Steel-Concrete Composite Option
- ? (G+3) & (G+6) Storied Residential Buildings with Steel-Concrete Composite Option
- ? Typical Design of Cost-effective Rural Housing
- ? Teaching Resource Material for Structural Steel Design, (3 volumes)
- ? Refresher Course on Steel-Concrete Composite Construction
- ? Design of Steel Structures in Rural Applications – Housing and School Building
- ? The Design Competitions for students of Architectures – a compilation of the outstanding designs (1999-2002).

- ? Design Guide book of light & temporary steel structures (steel intensive Puja Pandals and Platforms)

Continuing Activities of INSDAG

- ? Publications:
Steel in Construction
INSDAG News
- ? National Student Award Competition for Civil / Structural Engineering Students for Best Innovative Steel Design
- ? National Student Award Competition for Best Innovative Use of Steel in Architecture
- ? National Award Competition for Professionals on structural steel design and construction
- ? Revision of Codes and Standards (IRC & BIS)

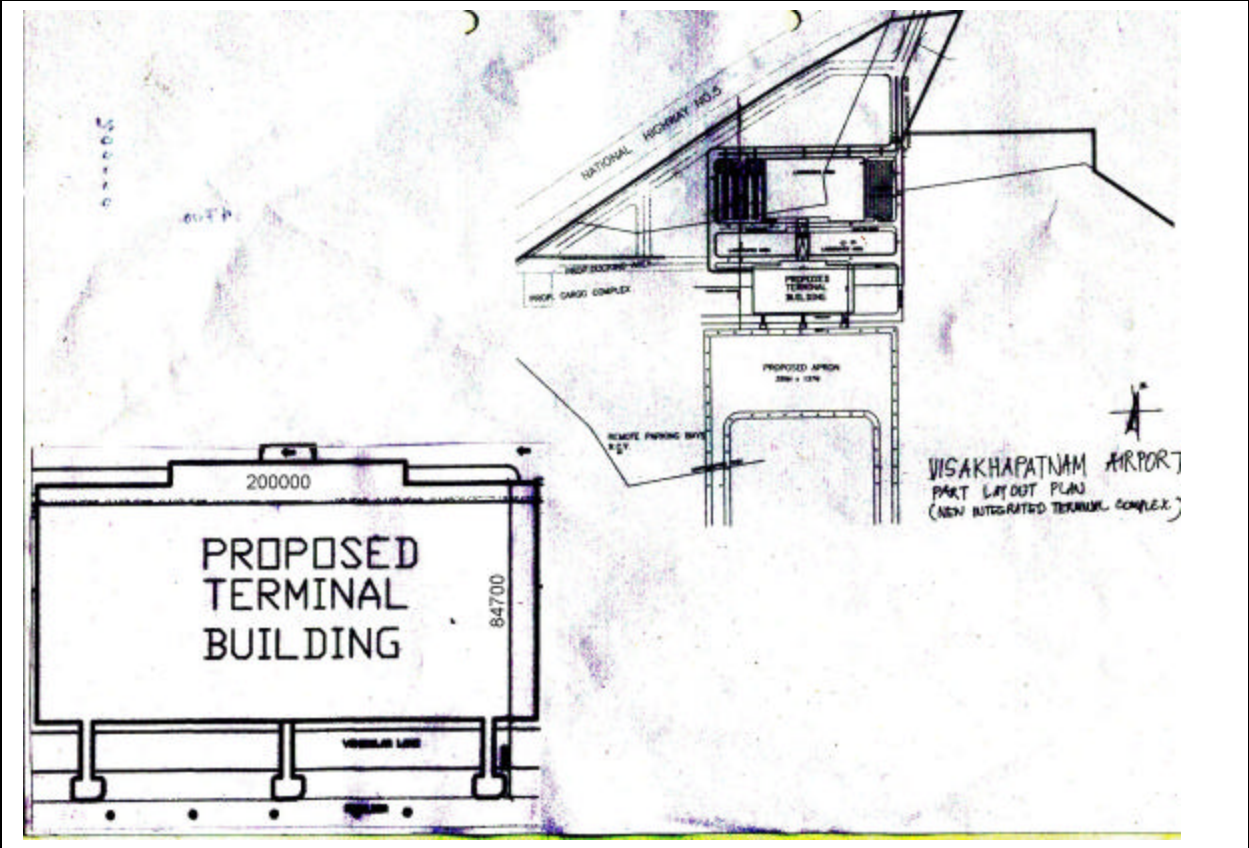
[Visit us at www.steel-insdag.org](http://www.steel-insdag.org)

[The Announcement and the Brief of this year's Competition is also available at INSDAG website for free downloading](#)

ATTENTION PARTICIPANTS

The duration of this Competition is approximately THIRTY weeks, which will go by very quickly. We encourage you to start immediately by familiarizing yourself with the project requirements and planning your progress for each week through the competition. Develop your design and do fantastic presentation drawings that anyone, especially the Selection Committee, will be thrilled to review. We encourage you to be creative and imaginative with your design and presentation. This competition is a great challenge, give it your best shot and most importantly have fun.

GOOD LUCK!



NOTICE OF INTENT FOR PARTICIPATION
(To be submitted before 31st January 2005)

STUDENT AWARD COMPETITION FOR THE BEST INNOVATIVE USE OF STEEL IN ARCHITECTURE
YEAR 2004-2005

If you wish to participate in the Competition, you are required to fill in this form of intent and return the same to the address given below in a sealed envelope along with a DD as mentioned below.

Name of the college:

Name of the guiding faculty/ HOD:

Signature of the guiding faculty/ HOD with date:

Student's name:

Residential address:

Telephone No.:

E-mail address:

Student's name:

Residential address:

Telephone No.:

E-mail address:

Student's name:

Residential address:

Telephone No.:

E-mail address:

Student's name:

Residential address:

Telephone No.:

E-mail address:

I/We ***agree to participate in the Competition*** organized by INSDAG for the year 2004-2005 and would request you to enroll my/our name/s in your database for record. I/We also ***agree to become Student Member/s of INSDAG*** by paying Rs. 200/- only for each one of us (onetime only) through Demand Draft drawn in favour of "Institute for Steel Development & Growth" payable at Kolkata enclosed herewith.

Signature(s): 1.

2.

3.

4.

Date:

Please send to:

Director General

Institute for Steel Development & Growth

"ISPAT NIKETAN", 1st Floor

52/1A Ballygunge Circular Road

Kolkata – 700 019

Telephone Nos: (033) 2461 4045/4047/4066; (033) 2486 0855/0858/0859

Fax: (033) 2461 4048 / (033) 2486 1013