National Competition for Students 2019

For the best Innovative use of Steel in Architecture

PROPOSED INTERNATIONAL LEVEL CRICKET STADIUM CUM CRICKET ACADEMY AT GHAZIABAD IN INDIA

Institute for Steel Development & Growth (INSDAG)
THE INSTITUTE

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

THE MISSION

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 OBJECTIVE

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 Competition for Students 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 THEME:

The Theme of the competition for the year 2019 is Steel intensive Proposed International Level Cricket Stadium cum Cricket Academy at Ghaziabad in India.

THE PRIZES

1st Prize : Rs. 45,000/- + Certificate
2nd Prize (2 nos.) : Each Rs. 30,000/- + Certificate
3rd Prize (2 nos.) : Each Rs. 20,000/- + Certificate

All submitted Entries will receive Participation Certificates.

ELIGIBILITY

The "Competition" is open to all first year to final year UG & PG Architecture Students from any AICTE / COA approved University / Schools of Architecture in India, Bhutan & Nepal

• for UG students, individual participant / team of maximum 4 (four) students in the team
• for PG students only 1(one) PG student either individually or in a team with maxm. 3(three) UG students

Students from Schools of Design may also participate.

Students from different colleges may form groups but in such case the colleges should be from same zone.

THE SELECTION

Four Zonal Selection Committees (one each for East, West, North & South Zone) consisting of renowned Architects and Faculties will make the Zonal Ranking (and Screening) of Entries at each Zone. In the Zonal Round, max. 16 (sixteen) best Entries will be selected (preferably 4 numbers from each Zone) based on the Zonal Ranking of the proposals, as per the criteria formulated by the Committee.

The participants of 16 short listed entries will be duly informed and called to Kolkata to appear before the Central Selection Committee in the Final Round of the Competition to display and present their design entries. The approximate timing of the same is around February 2020. The detailed programme will be intimated later on to all concerned. The top five Entries will receive the Awards.
**ZONAL COORDINATORS**

**EAST ZONE** [Assam, Bihar; Jharkhand; Odisha; West Bengal; Chhattisgarh; Tripura, Meghalaya, Manipur, Mizoram, Nagaland, Arunachal Pradesh, Sikkim, Bhutan, Nepal]

Prof. (Dr.) Arup Sarkar  
Department of Architecture  
Town & Regional Planning  
Indian Institute of Engineering, Science & Technology (IIEST)  
Shibpur, Howrah – 711 103, West Bengal  
M: 9830198481  
E-mail: arupsarkar.ar@gmail.com

**WEST ZONE** [Goa; Gujarat; Maharastra; Rajasthan]

Prof. (Dr.) Ravindra Deshmukh  
D.Y. Patil School of Architecture  
Sr.No.124, 2016 At/Post-Ambi  
MIDC Road, Talegaon  
District Pune-410506, Maharashtra  
M: 9119195041  
E-mail: svp.ambi@gmail.com, deshmukhr04@gmail.com

**NORTH ZONE** [NCR; Himachal Pradesh; Haryana; Jammu & Kashmir, Madhya Pradesh; Punjab; Uttarakhand; Uttar Pradesh]

Ar. Ritu Verma  
Associate Professor  
Department of Architecture  
Axis Institute of Architecture,  
Axis College  
Kanpur – 208 011  
M: 9125631357 / 8222888051  
E-mail: rituverma06@rediffmail.com

**SOUTH ZONE** [Andhra Pradesh; Telengana; Karnataka; Kerala; Tamil Nadu, Puduchery]

Prof. Madhavan Thirumeni  
Director  
Sasi Creative School of Architecture  
293/2A, Pollachi Main Road (NH 209)  
Myleripalayam, Coimbatore – 641 032  
M: 9840044179  
E-mail: director@scsa.ac.in

**GENERAL RULES**

1. Each participating group is required to fill in the enclosed “Expression of Interest” (EOI) form (photocopies are acceptable) for participation.

2. The participating students are required to enroll themselves as student member of INSDAG before submission of entries with student membership fees of Rs. 800/- for each participant of the group in the form of bank draft payable to Institute for Steel Development & Growth.

3. Students who have already been enrolled as members of the Institute should mention their membership number only in the EOI form and need not pay any further membership fees.

4. But newly admitted PG students who had been INSDAG members while in UG, need to pay the membership fees again.

5. There is no limitation of the numbers of participating groups from any Institution.

6. Originality of work is essential and the application will be disqualified, if found otherwise.

7. The decision of the Expert Committee is final and binding. Canvassing of any kind will lead to disqualification.

8. Family members / relatives of Selection Committee / INSDAG Staff are debarred from taking part in this competition.

9. All the entries / proposals received by INSDAG at all stages of the above competition shall be treated as property of INSDAG. However, all the drawing sheets, documents & models will be returned to the teams after the final round is completed.

10. INSDAG will not take any responsibility in case of missing of any documents /communications (if any) from any side while in transit.

11. Student Membership fees once received by INSDAG against registration in this competition shall not be refunded for reason(s) whatsoever.

12. Outstation candidates appearing for the final round of the competition in Kolkata will be reimbursed with to-and-fro ordinary AC 3-tier sleeper class / AC Chair Car fare by the shortest route on production of proof of travel. Accommodation in Guest House / Hostel will be considered depending upon availability.

**DELIVERABLES & SUBMISSION**

The participants are invited to send their “Expression of Interest” (EOI) along with a DD of Rs 800.00 to

The Director General, INSDAG  
(Kind Attention: Mr. M M Ghosh – Coordinator)  
ISPAT PRAGATI BHAWAN.  
793 Anandapur, Kolkata 700107 and intimate by email also at ins.steel@gmail.com

The participants are invited to send their entries to respective Zonal Coordinators within the date of submission of entry.

The entries should contain the following:

- A self-declaration by the applicant(s) certifying the originality of the work
- A report - 8 pages (maxm.) A4 size (inspiration, case, idea exploration, material palette, concept)
• Perspective View of the structures
• Conceptual Drawings: Preferable scale 1:500, 1:200, 1:100 (or take appropriate scale of your own choice)
• Presentation Drawings: Preferable scale 1:500, 1:200, 1:100 (or take appropriate scale of your own choice)
• Elevations (two (2) facades or more): Preferable scale 1:500, 1:200, 1:100 (or take appropriate scale of your own choice)
• Sections (two (2) sections or more): Preferable scale 1:500, 1:200, 1:100 (or take appropriate scale of your own choice)
• Details of steel used area
• Applicants should try to make them easy to understand visually
• Drawings in suitable scale – 6 nos. (maxm.) A1

FOR FINALISTS ONLY
Additionally the followings are required:
• A physical model in suitable scale
• 3D model in software (walkthrough) to exhibit the design detailing and overall form.
• Soft copies of drawings / reports / presentation must be submitted in DVD form in addition to the hard copies.
• Physical model & 3D soft model, PowerPoint presentation

THE BRIEF
DESIGN THEME:
Proposed INTERNATIONAL LEVEL CRICKET STADIUM cum CRICKET ACADEMY AT GHAZIABAD IN INDIA

AIMS & OBJECTIVES: The aim of this design is to explore potential of steel as a versatile material for the Architectural and Engineering expression through innovative thoughts in designing architecturally the Cricket stadium (along with roof covering the spectators seating area) and the associate facilities in the city of Ghaziabad.

PREAMBLE: The city of Ghaziabad in Uttar Pradesh will be proud to have a new world-class International cricket stadium. UP Cricket Association has forwarded a proposal to GDA Board for developing a stadium on a plot of 33 acres.

The proposed stadium will have an open area of parking for cars and the stadium will also have a sports academy near Raj Nagar Extension.

The stadium will be accessible directly through the Hindon elevated road which is under construction and connecting UP-Gate (Delhi-Ghaziabad border) to Raj Nagar Extension Morta, Ghaziabad 201003.

The subsequent 30 years saw the progression of concrete and steel structures that featured relatively uniform, basic design and amenities. In the early 1970s specialized, dedicated sports architecture practice took hold of the market.

The development of modern sports facilities in the globe due to intervention of a variety of sports can be seen in the start of 20th century. These public assembly facilities-Stadium, has become entertainment destination that cater to a huge volume of spectators.

PROJECT BRIEF:
You are expected to solicit design proposal for the live International Cricket Stadium at Ghaziabad. The stadium will have an estimated seating capacity of 45,000 and is expected to be ready by the end of 2019. It will also have a dedicated area of open parking for 2,500 vehicles, apart from a space for a cricket academy. These will be open spaces only and no detailed design/planning is to be done.

Besides basic planning, the students are expected to focus on innovative use of steel in designing the following suggestions:

Facilities: The stadium should have all modern facilities
Zoning: Zoning may be done as **Activity area, Viewing area, Circulation area, Outside** (the stadium) area.

**Activity Area:** The playing Area: should consider a standard pitch for match, a pitch for practice, warm up area. Angle of the pitch is important. Advertisement boards in playing area, underground drainage system in playing area for exit of rain water may be considered. Changing rooms, umpires area, dressing rooms, gymnasium (optional) and pavilion may be provided suitably. Access to playing area, provision of proper fences for restricting access to playing area to be designed properly.

**Viewing Area:** Seating area, access, numbers of seats, passages are to be planned. The roof structures should be long spanned, with no obstruction in viewing.

**Circulation Area:** Crowd flow and crowd management, circulation of human traffic: The ingress and egress of huge volume of spectators should be planned in such a way that the movement of spectators be easy. Access gates, stairs, gangways, concourses, vomitories are to be designed accordingly. Provisions of lifts, escalators may be considered.

**Outside (the stadium area):** Green Zone, water body, Open zones for car parking (on surface only with proper layout markings on ground), open zone for a cricket academy, Transit accommodation facility for Metro / Bus Stands may be considered.

Conceptual provisions may be considered regarding Water (availability and supply points), Waste (management and disposal), Energy (efficient use of natural energy, Rainwater Harvesting, Solar and Wind energy) and Transport facility.

Further, it should have a specific area for
- press and publicity
- Special seating arrangements for “high security personnel”, dignitaries
- Facility for first aid and mini hospital
- Security Booths and facilities for security arrangements

Planning, Design should consider:
- Provisions for fire fighting and fire escape
- Facility for Electrical Sub stations
- Provisions for Drinking water, water for fire fighting
- Arrangements for cafeteria
- Arrangement and positioning of wash rooms
- Any other facility felt necessary
- Special arrangements for security for all

Maintenance of structures is of high priority, Proper facilities are to be provided for access to the structures from the point of maintenance, viz. provisions for easy access to the lightings, roof structures etc

Proper signages are to be provided at strategic locations.

Efficient use of natural lighting and artificial lightings (viz floodlights for lighting the play ground) may be considered.

Floor plans should be colored for each function and made easily understandable visually. Floor plans for all the levels mentioning their respective elevations (EL) with respect to datum line EL (+) 0.0 should be indicated. Areas which will be public open spaces should be specified.

The design should try to make it easy-to-understand as well as project image of contemporary India. Design should clearly define the idea for access to the stadium on foot or by car and management of crowd flow (e.g. by using diagrams). Added to this the overall form should be innovative, attractive and iconic. Most importantly the innovations in the steel design must be clearly represented.

Size of Cricket ground: Standard pitch length. The square boundary and straight boundary may be 225ft (68.58 metres).

![Plan of the Playing area of the Cricket Ground](image)

**JUDGEMENT CRITERIA:**

The submission would be graded according to the following criteria:-

1. The physical manifestation of the brief into the design – its form and functionality.
2. The innovative and judicious usage of Steel in the design.
3. The presentation of the said design – via. Drawings sheets (for both Zonal and Final Round, if selected) and physical model and 3D sketch-up model in software, walkthrough and powerpoint presentation (for Final Round only, if selected).
GUIDELINES
The following suggestions are made for design of the STEEL intensive stadium:

a. The subjects of the competition are to explain the basic concept of your design in an easy-to-understand way. Conceptual drawing may be used when necessary.

b. The proposed structure will be easy-to-understand visually (e.g. Features, quality, aesthetics and visual impact by colouring where necessary)

c. The students are free to evolve innovative ideas for the various aspects of the project but satisfying the basic requirements furnished in the Brochure

1.0 The following may be noted while working out the schemes:
- Use of steel to the maximum extent in structural framing.
- Use of steel elements in roofing, cladding, fascia, stairs, main entrance gates and other areas as far as possible along with other construction materials.
- Use of Steel-Concrete Composite Structures could be proposed because it may be desirable to include RCC elements in some locations such as slabs etc.

2.0 Emphasis should be laid on design process and conception of innovative steel structures of various forms tempered with the practicality of putting the concept into reality along with Structural Stability.

3.0 Fire Safety/Lightning Protection norms are imperative. Encasement with concrete may not be adopted.

4.0 Detailed structural design and cost estimation / plumbing & sanitary design and auxiliary services design are outside the scope of the competition.

CODES AND REFERENCES
1. Use of Internet and recent publications for obtaining information on similar Structures worldwide is suggested. However, direct copying is prohibited. (Also refer rules under submission criteria in the announcement section)

The following codes and publications may be used for reference purpose:
- IS:800, IS:801, IS:808, IS:875, IS:1161, IS:1893, IS:4923, IS:9595, IS:11384 – the latest versions of these codes are to be referred.
- Candidates are free to refer suitable Indian/ British or other International 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.

STEEL ELEMENTS
All available Steel Elements may be used for the above purpose. These include:
- Steel Rolled Sections :
  Standard Beam Sections / wide / narrow parallel flange Beam Sections, Channel Sections / Angle Sections etc.
- Steel Fabricated / Built-up Sections / Castellated sections
- Rectangular Hollow Sections / Square Hollow Sections / Circular Hollow Sections
- Plates and Flats, Rounds and Squares
- Wire Ropes
- Cold Formed Steel
- Corrugated / Plain/ Embossed Profiled Sheet
- Colour Coated/ Plastic Coated/Galvanized Sheet
- Stainless Steel Sheet and Sections
- High Tensile Steel, Weather Resistant Steel etc

ENTRIES / APPLICATIONS
Last date of sending Expression of Interest – 30th September 2019
Last date of sending entries – 31st October 2019

KEY POINTS FOR PARTICIPATION:
- To fill up the EOI
- To take INSDAG’s students membership
- To submit the EOI along with membership fees by 30th September 2019 to Director General-INSDAG
  (Kind Attention- Mr M M Ghosh-Coordinator)
  Ispat Pragati Bhawan, 793, Anandapur. Kolkata 700107
- To send the completed entries by 31st October 2019 to the respective Zonal Coordinator.

REQUEST TO
Principals, Directors and HODs of all the Architectural Institutions.

This is a prestigious National Level Competition. This Brief may be assigned as a project / sessional work as a part of the curriculum of your students
Winning Colleges of the Competition (1999-2017)

Anna University, Chennai; Rizvi College of Architecture-Mumbai; SRM Engineering College-Tamil Nadu; Jadavpur University-Kolkata; LAD & SRP College-Nagpur; Priyadarshini College-Nagpur; Academy of Architecture-Mumbai; Dr. MGR Engineering College-Chennai; TVB School of Habitat Studies-New Delhi; IIT-Roorkee; Measi Academy of Architecture-Chennai; D Y Patil College of Architecture-Pune; Apeejay SAP-Noida; Chitkara SPA-Patiala; SPA-New Delhi; Sathyabama University-Chennai; VNIT-Nagpur; Bharathidasan University-Trichy; Indian Institute of Technology-Guwahati; Bengal Engineering College & Science University; KIIT-Bhubaneswar; Maulana Azad National Institute-Bhopal; Z.H.C.E.T, A.M.U-Aligarh; Lovely University-Punjab; KIIT-Bhubaneswar; Pornima University-Jaipur,


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<tr>
<th>Year</th>
<th>North Zone</th>
<th>East Zone</th>
<th>West Zone</th>
<th>South Zone</th>
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<tbody>
<tr>
<td>1999-2001</td>
<td>Prof. A G Khanna, Director SPA, New Delhi</td>
<td>Mr. Kabir Ray, Chairman, IIA, W.B Chapter</td>
<td>Ar. S P Gad, Principal, Sir J J College of Arch, Mumbai</td>
<td>Ar. A Haris, Dean, SAP, Anna Univ, Chennai</td>
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<tr>
<td>2001-2003</td>
<td>Prof. A G Krishamenon, Director, TVB School of Habitat Studies, New Delhi</td>
<td>Prof. Nirmalendu Sengupta, HOD, BIT Mesra, Ranchi</td>
<td>Prof. P P Ambedkar, Principal, Academy of Architecture, Mumbai</td>
<td>Dr. K S Ananthakrishna, HOD, RV College of Engineering, Bangalore</td>
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<tr>
<td>2003-2004</td>
<td>Prof. M N Joglekar Vastu Kala Academy’s School of Arch, New Delhi</td>
<td>Prof (Dr.) Manju Halder HOD, Dept. of Architecture, B E College, Shibpur</td>
<td>Prof Manoj Parmar Kamla Raheja Vidyanidhi Inst. for Architecture, Mumbai</td>
<td>Ar. R Deshmukh, Dept. of Architecture Manipal Institute of Technology, Karnataka</td>
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<tr>
<td>2004-2006</td>
<td>Prof. Anurag Roy Vastu Kala Academy’s School of Architecture, New Delhi</td>
<td>Prof (Dr.) Manju Halder HOD, Dept. of Architecture, Bengal Engineering College &amp; Science University</td>
<td>Prof Manoj Parmar Kamla Raheja Vidyanidhi Institute for Architecture &amp; Environmental Studies, Mumbai</td>
<td>Prof. Harimohan Pillai HOD MES School of Architecture, Kerala</td>
</tr>
<tr>
<td>2006-2007</td>
<td>Prof. Anurag Roy Vastu Kala Academy’s School of Architecture, New Delhi</td>
<td>Prof. K B Mahapatra Director, Piloo-Mody College of Architecture, Orissa</td>
<td>Prof. (Dr.) U S Chakradeo School of Arch, LAD College for Women, Nagpur</td>
<td>Prof. (Dr.) Ranee Vedamuthu HOD, SAP, Anna University, Chennai</td>
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<tr>
<td>2007-2008</td>
<td>Prof. Satish Khanna HOD; SPA, New Delhi</td>
<td>Prof. K B Mahapatra Director, Piloo-Mody College of Architecture, Orissa</td>
<td>Prof. (Dr.) U S Chakradeo Head of Department, School of Architecture LAD College for Women, Nagpur</td>
<td>Prof. (Dr.) Ranee Vedamuthu HOD SAP, Anna University, Chennai</td>
</tr>
<tr>
<td>2009-2010</td>
<td>Prof. S M Akhter The Dean, Faculty of Architecture Jamia Millia Islamia, New Delhi</td>
<td>Prof. Tapas Kumar Bhattacharya Department of Architecture; Jadavpur University, Kolkata</td>
<td>Prof. Dhananjay Chaudhuri Padmeshree Dr. D Y Patil College of Architecture, Pune</td>
<td>Prof. N Altaf Ahmed The Director, MEASI Academy of Architecture, Chennai</td>
</tr>
<tr>
<td>2013-2015</td>
<td>Prof. Ranjana Mital SPA, New Delhi</td>
<td>Prof. Shankha Pratim Bhattacharya Asst Professor, IIT, Kharagpur</td>
<td>Prof. Anand Ukidve Aayojan School of Architecture &amp; Design, Pune</td>
<td>Prof. D V Solomon Director, McGan’s Ooty School of Arch TN</td>
</tr>
<tr>
<td>2016-2017</td>
<td>Ar. Ritu Verma Associate Dean; Department of Architecture Om Institute of Architecture &amp; Design, Hisar</td>
<td>Ar. Sanghamitra Sarkar Associate Professor, Department of Architecture Jadavpur University, Kolkata</td>
<td>Ar.(Dr.) Sudhir D Chavan Principal Smt. Kashibai Navale College of Architecture, Pune</td>
<td>Ar. Gauri N Shiurkar Principal McGan’s Ooty School of Architecture</td>
</tr>
<tr>
<td>2017-2018</td>
<td>Ar. Ritu Verma Associate Professor Axis College; Kanpur – 208 011</td>
<td>Prof. (Dr.) Arup Sarkar Department of Architecture; Town &amp; Regional Planning II EST, Shibpur; Howrah – 711 103</td>
<td>Prof. (Dr.) Ravindra Deshmukh D.Y.Patil School of Architecture Pune-410506</td>
<td>Prof. Mohammed Ali Sharief Director; Sasi Creative School of Architecture Coimbatore – 641 032</td>
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Themes of the Competitions (From 1999 to 2018):

Centre for Performance of Arts at Kolkata; Sports cum Recreation Centre at Chennai; International Standard Shopping Plaza at Mumbai; World-class National Art Gallery at Banjara Hills, Hyderabad; International Cricket Stadium at Raipur, Chattisgarh; International Airport Terminal Building at Vishakhapatnam; World-class Permanent Trade Fair Complex at Kolkata; World-class Railway Station in Rajasthan; 200 bedded Hospital at Burari, Kaushik Enclave, Delhi; World-Class Vehicle Terminus; Steel intensive village; Steel intensive Martyr Memorial; Steel intensive (B+G+4) Storeyed Office Building; (B+G+8) Storeyed super specialty hospital in Kolkata; Cultural Complex-cum-Spiritual Centre in any urban centre in India; Steel intensive Highway amenities center; Tall Building(s); Elevated Cycle Track; International Airport proposed by AAI
EXPRESSION OF INTEREST FOR PARTICIPATION
(To be submitted on or before 30th September 2019)
NATIONAL COMPETITION FOR STUDENTS FOR THE BEST INNOVATIVE USE OF STEEL IN ARCHITECTURE
YEAR 2019

Please 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 & Address of the college:
Name of the guiding faculty/ HOD:
Signature of the guiding faculty/ HOD with date:

Student’s name (Capital)   Mr. / Ms. : .................................................................
Year of Study : ............Telephone No.:.................................
E-mail address : .................................................................

Student’s name (Capital)   Mr. / Ms. : .................................................................
Year of Study : ............Telephone No.:.................................
E-mail address : .................................................................

Student’s name (Capital)   Mr. / Ms. : .................................................................
Year of Study : ............Telephone No.:.................................
E-mail address : .................................................................

Student’s name (Capital)   Mr. / Ms. : .................................................................
Year of Study : ............Telephone No.:.................................
E-mail address : .................................................................

I/We agree to participate in the Competition organized by INSDAG for the year 2019 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. 800/- 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. Students applying in a group may submit a consolidated draft.

Signature(s): 1. 2. 3. 4.

Date

Please send to:
The Director General
Institute for Steel Development & Growth (INSDAG)
(Kind Attention - Mr. M M Ghosh (Mob. 9748482618)
“ISPAT PRAGATI BHAWAN”, 2nd Floor
793, Anandapur,
Kolkata – 700 1 07
E-mail: ins.steel@gmail.com / insdag@rediffmail.com

Avail Student Membership of INSDAG
Pay one-time Rs. 800/- only for your full period of student life and get benefits under students category from INSDAG