NATIONAL INSTITUTE OF SECONDARY STEEL TECHNOLOGY

(Estd. By Ministry of Steel, Govt. of India)

IN THE SERVICE OF INDUSTRY FOR MORE THAN 34 YEARS

BACKGROUND

National Institute of Secondary Steel Technology (NISST) has been set up as a registered society on 18th August, 1987 under the Chairmanship of the then Development Commissioner of Iron & Steel. The Institute is located at Mandi Gobindgarh. It aims to cater to the HRD and technology upgradation needs of the steel sector. The institute is managed by a Board of Governors headed by Joint Secretary, Government of India, Ministry of Steel, ex-officio Chairman of the Institute.

The Institute is working for the benefit of Secondary Steel Sector for more than 34 years. The focus areas are Energy Audits, Training and Skill Development, Seminars, Workshops, Testing Services, Safety Inspection & Audits and Consultancy Services.

The Institute is accredited by NABL for Chemical & Mechanical Laboratories and Recognized by Bureau of Indian Standard (BIS) for various tests for the specified products as per Indian standards related to Iron & Steel. Institute (NISST) is empanelled with B.E.E as Accredited Energy Auditors and with PCRA as Energy Auditor.

The following areas of secondary steel sector are under the purview of the Institute:

- Electric Arc and Induction Furnace
- Rolling and Re-rolling Mills (Hot & Cold)
- Direct Reduced Iron units
- Steel Recycling from the Ship Breaking Industry

CAMPUS

The Institute has its own campus constructed on six acres of land located on G.T. Road, (National Highway No. 44), Mandi Gobindgarh (Punjab) having covered area of 7000 sq. meters, which consists of Administrative Block, Faculty Block having different laboratories/lecture halls. Besides, it also has Hostel facility as well as staff Quarters. In addition, its documentation centre/library is fully equipped with latest technical journals and books related to steel sector.

FACULTY

The Institute has a highly qualified and experienced team of engineers.

OUR VISION

NISST will be the premier institute in the country channelizing state of at knowledge and expertise catering to the various needs of the industries of secondary steel sector and helping the country to achieve the desired fast and healthy growth of this core industrial sector resulting in big economic, environmental and social gains in the long run of the country.

THE AIMS & OBJECTIVES OF THE INSTITUTE

- To provide trained technical manpower to the secondary steel sector through Short-term and Long-term courses and to update their knowledge base.
- To bring awareness about the State of Art Technology by holding Seminars, Workshops, Symposia etc.
- To provide various industrial services and testing facilities.
- To extend consultancy services to industries in terms of solving technological problems, improving energy efficiency and reducing pollution levels.
- To conduct Research, Development and Design work in frontier areas for providing updated technology to this sector.
- To organize for documentation and information retrieval services to the industry.
- To provide the platform for interaction between industry and educational as well as research institutions.

ACCREDITATIONS/RECOGNITIONS

>> Empanelled as Accredited Energy Auditor with Bureau of Energy Efficiency, Ministry of Power, Govt. of India. (BEE)
>> Empanelled by BEE for Monitoring & Verification (M&V) activities under PAT scheme.
>> Recognized as Competent Persons by Director of Factories, Government of Punjab , Daman & Diu and Dadra & Nagar Haveli for safety Inspections
>> Recognized by Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry.
>> NABL Accredited Chemical, Mechanical Lab, Metallographic Labs
>> Recognized by BIS for testing of sixty steel products as per IS.
>> Member, BIS Committees
>> Member of state expert advisory committee constituted by Ministry of environment & Forest, Government of India
>> Executive member of National Safety Council, North zone chapter. (NSC)
>> Member, Technical Committee, National Occupational Standards, IISSSC

MAJOR ACTIVITIES OF NISST

- Human Resource development
- Consultancy Services in all the fields of Iron & Steelmaking
- Industrial Research & Development.
- Energy Audits
- Process Audits
- Testing Facilities
  - > Chemical, Energy & Environmental Lab
  - > Metallographic Lab
  - > Spectrometer Lab
  - > Mechanical & NDT Lab
  - > Electric Lab
- Pollution Assessment
- CAD/CAM/CAE
- Safety Inspection & Safety Audits of Factories
- Capacity Assessment
- Feasibility Report Preparation
- Problem solving study
- Performance Improvement Trainings
- In-House Training Programmes on all technical areas in Iron and Steel.

R&D PROJECT

1. "Development of micro alloyed steels through induction furnace and controlled rolling route". The results were encouraging. Fe-700 grade could be produced by using micro alloys through induction furnace.
2. "Production of low phosphorous steel using DRI through induction furnace route jointly with NML, Jamshedpur". Industrial scale trials have been carried out in 3 different sizes of furnaces and reduced final phosphorous contents in steel using developed flux.
3. Project on computer simulation & E-Demonstration of a Reheating Furnace with the support of Govt. of India R&D Fund.
4. Project on "Development of cost Effective refractory lining materials for Induction Melting Furnace suitable for production of quality steel" funded by Govt. of India R&D Fund.
5. Project on "Development of a Cost Effective Green Technology for Pre reduction of Chromite Ore in Tunnel Kiln & Production of High Carbon Ferro Chrome in SAF" funded by Govt. of India R&D Fund.

TESTING SERVICES

CHEMICAL, ENERGY & ENVIRONMENTAL LAB

- Re-heating furnace performance studies & Thermal Audits
- Chemical Analysis of Steel
  Fuel Analysis (Moisture/Viscosity, Pre-Heat Temp./Calorific Value)
- Mass Analysis of Zn Coating and Adherence Analysis

METALLOGRAPHY LAB

- Micro Structure with Photograph
- Grain Size, Inclusion Rating, Decarb Depth & Case Depth
- Hardenability Determination
- Nodule Count, Carbide, Nodule shape Determination in S G Cast Iron
- Graphite Flake type and Size in Cast Iron
- "Zn' Coating thickness Determination in G I

SPECTROMETER LAB

- Chemical Analysis of Steel & Cast Iron

MECHANICAL & NDT LAB

- Dynamic/Impact hardness Test (Shore)
- Tensile/Compression Test by UTM & Bend/Re-bend Test
- Measurement of Tolerances
- Impact Testing (Izod/Charpy) & Hardness Rockwell/Brinell
- Draft Expanding, flattening 7 Twist (for tubes)
- Nut/Bolt Test (Tensile Type)
- Magnetic Particle Testing
- Double Shear Test
- Ericson Cupping Test
- Ultrasonic Test

ELECTRICAL LAB

- Electrical Audits
- Transformer Oil filtration/Dehydration/Dialectic Strength Test
- Insulating Resistance Testing

SAFETY INSPECTION OF FACTORIES

- Dangerous machinery/Pressure Vessels
- Lifting tackles/Hoists & Cranes & Accident Enquiries

Mechanical, Chemical & Metallographic testing laboratories of National Institute of Secondary Steel Technology have been granted NABL Accreditation and BIS Recognition for Steel Testing as per the details mentioned at www.nisst.org.

NISST

CONTACT DETAILS

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