NATIONAL INSTITUTE OF SECONDARY STEEL TECHNOLOGY
(Estd. By Ministry of Steel, Govt. of India) Post
Box No. 92, Sirhind Side, G.T. Road, Mandi
Gobindgarh, Punjab-147301

ANNUAL REPORT

FINANCIAL YEAR 2024 - 25

CONTENTS

CHAPTER -1

BACKGROUND

NATIONAL INSTITUTE OF SECONDARY STEEL TECHNOLOGY (NISST) was established as a society under Societies Registration Act, 1860 on 18th August, 1987. NISST was established by Ministry of Steel out of erstwhile Billet Re-rollers Committee fund of Rs. 10.08 Crore with the vision to cater the training and technological needs of the Secondary Steel sector with a focus to make the sector sustainable and competitive.

AIMS AND OBJECTIVE OF THE NISST

- 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, and symposia.
- 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 & 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 a platform for interaction between industry and educational as well as research institutions.

AREAS OF SECONDARY STEEL SECTOR UNDER THE PURVIEW OF THE INSTITUTE

- Iron Making – Direct Reduced Iron and Mini Blast Furnaces
- Steel Making - Electric Arc Furnace and Induction Furnace
- Rolling Mills & Re-Rolling Mills (Hot & Cold)
- Steel Recycling from the Ship Breaking Industry

ACCREDITATIONS/RECOGNITIONS

- Empaneled as Accredited Energy Auditor with Bureau of Energy Efficiency, Ministry of Power, Govt. of India.
- Empaneled by BEE for M&V activities under PAT scheme.
- Recognized as Competent Persons by Director of Factories, Government of Punjab, Daman & Diu Dadra & Nagar Haveli, Kerala, Chhattisgarh, Meghalaya, Puducherry for safety Inspections
- NABL Accredited Chemical, Mechanical Lab & Metallographic Labs for 98 tests.
- Recognized by BIS for testing of 62 steel products as per IS.
- Member, BIS Committees
- Executive member of National Safety Council, North zone chapter

ENERGY AUDITS

With the strength of its qualified technical manpower, NISST has conducted numerous energy audits, resulting in significant reductions in energy consumption and operational costs across the steel sector. Over the years, NISST has actively executed a range of energy efficiency-related initiatives. These include detailed energy audits in steel plants, mandatory energy audits of Designated Consumers as per regulatory requirements, and rigorous Measurement & Verification (M&V) audits to assess energy-saving interventions. Presently, NISST continues to play a critical role in identifying energy-saving opportunities and recommending actionable solutions for sustained improvement in energy performance. Through these ongoing efforts, NISST not only contributes to enhanced industrial efficiency but also supports India's broader energy conservation goals in secondary steel sector.

SAFETY AUDIT/ VERFICATIONS/ INSPECTION

Under the capacity of Competent Persons recognized by the Directors of Factories, Government of Punjab, Kerala, and the Union Territories of Daman & Diu and Dadra & Nagar Haveli, NISST has been actively engaged in conducting safety audits, inspections and trainings across various steel plants in these regions. These initiatives aim to assess safety practices, identify potential hazards, and promote safer work environments. In parallel, NISST continues to organize focused training programs in industrial safety, equipping plant personnel with practical knowledge to prevent accidents and enhance day-to-day safety standards. These

ongoing efforts reflect NISST's commitment to nurturing a proactive safety culture in the steel industry.

TESTING LABS

Over the past decade, NISST has steadily emerged as a key institution offering reliable and specialized testing facilities for the iron and steel sector. To cater to the growing demands of quality assurance and technical evaluation, NISST has established dedicated laboratories in the following areas:

- Mechanical Testing
- Chemical Testing
- Metallography
- Pollution Monitoring

Out of the above, Mechanical & Chemical testing labs are accredited with NABL. Also, NISST has taken recognition for testing of 62 different steel products from Bureau of Indian Standards (BIS).

Contribution For the Growth of Steel Industries

- **Reduction in Energy consumption per ton of steel:** Contributed in reduction of Energy consumption by conducting shop-floor training and awareness programs at various levels, resulting into substantial saving of National wealth and abetment in air pollution level.
- **Minimizing Material Loss:** Through targeted training and hands-on engagement at the shop-floor level, NISST has helped reduce scale loss in production processes, thereby assisting industries in bringing down their production costs.
- **Design and Development of Reheating Furnaces:** NISST has actively supported the SRRM (Secondary Re-Rolling Mill) sector by designing efficient reheating furnaces tailored to industry needs.
- **Enhancing Steel Product Quality:** Various shop-floor trials and technical interventions facilitated by NISST have contributed to the improvement of steel product quality.
- **Technical Capacity Building:** By guiding units on aspects such as direct rolling, rejection control, and productivity optimization, NISST has helped enhance operational efficiency and cost-

effectiveness across the sector.

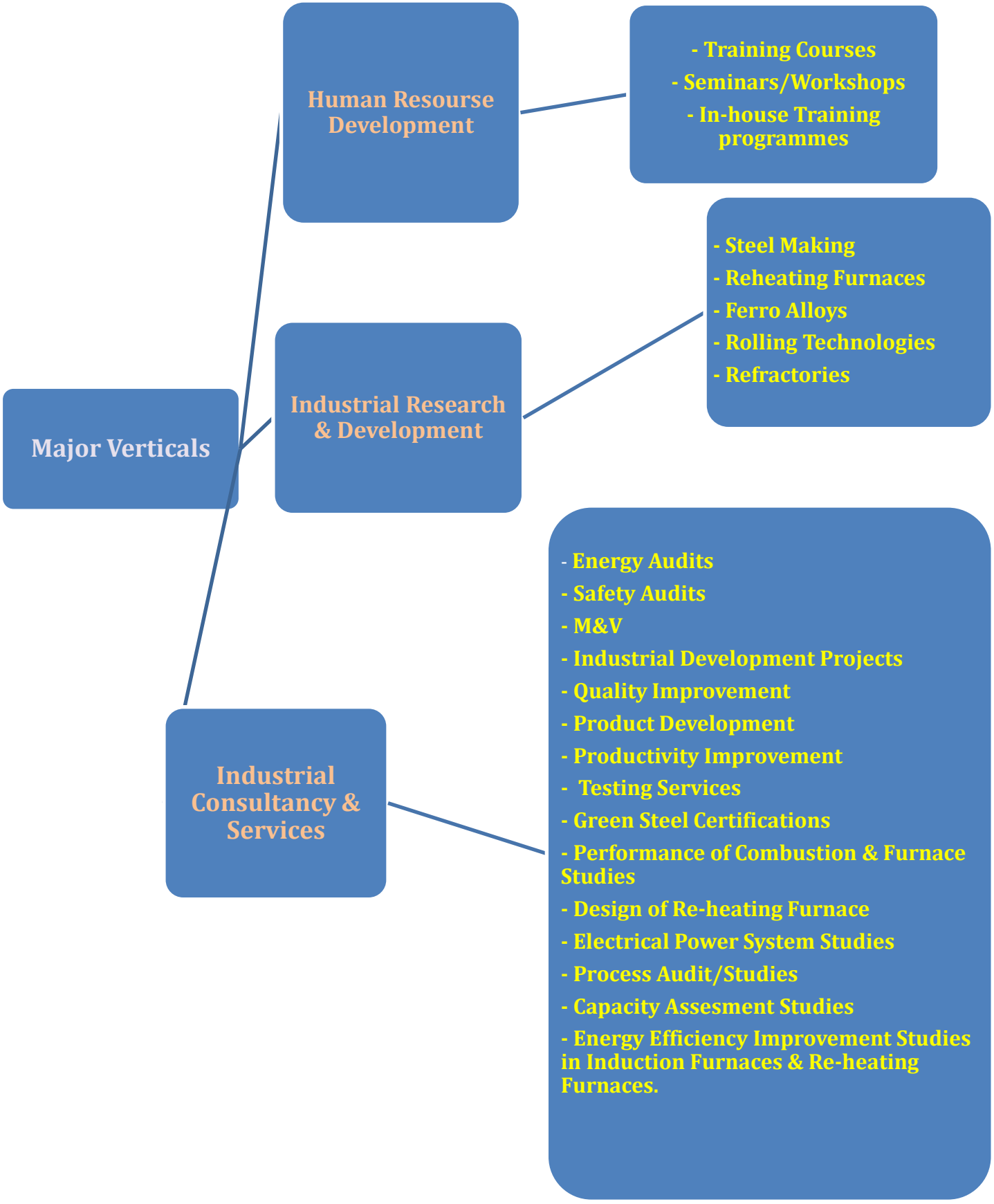
- **leaner Fuel Adoption:** In Mandi Gobindgarh, Punjab, NISST has played a key role in converting coal-fired reheating furnaces to PNG-fired alternatives, supporting cleaner and more efficient fuel usage.
- **Cluster Development Initiatives:** In alignment with the goals of the National Steel Policy, NISST continues to work closely with the Secondary Steel Sector to implement cluster development programs focusing on steelmaking and rolling technologies.

IMPLEMENTATION OF RTI ACT.2005

NISST has proactively published information under Section 4(1)(b) of the RTI Act, 2005 on its official website: www.nisst.org. Applications and requests received under the RTI Act have been duly addressed in accordance with the provisions of the Act.

Between **1st April, 2024,** and **31st March, 2025,** a total of **08 RTI applications** were received and all were successfully disposed of. Additionally, **one application** was received through the RTI online portal: www.rtionline.gov.in.

CHAPTER-3


Major Verticals
Human Resourse Development
- Training Courses
- Seminars/Workshops
- In-house Training programmes
Industrial Research & Development
- Steel Making
- Reheating Furnaces
- Ferro Alloys
- Rolling Technologies
- Refractories
Industrial Consultancy & Services
- Energy Audits
- Safety Audits
- M&V
- Industrial Development Projects
- Quality Improvement
- Product Development
- Productivity Improvement
- Testing Services
- Green Steel Certifications
- Performance of Combustion & Furnace Studies
- Design of Re-heating Furnace
- Electrical Power System Studies
- Process Audit/Studies
- Capacity Assesment Studies
- Energy Efficiency Improvement Studies in Induction Furnaces & Re-heating Furnaces.

TESTING FACILITIES AVAILABLE IN NISST

CHEMICAL ENERGY & ENVIRONMENTAL LABORATORY

<table>
<tr><th>CHEMICAL ANALYSIS OF IRON & STEEL</th><th>SPONGE IRON ANALYSIS</th></tr>
<tr><td rowspan="3">1. Basic 5 elements (i.e. C, Mn, Sip & S)*
2. Nickel*
3. Chromium*
4. Tungsten
5. Molybdenum in steel*
6. Aluminum*
7. Copper*
8. Titanium*
9. Nitrogen*
10. Total Carbon in Cast-iron
11. Silico-Manganese
12. Vanadium*
13. Boron
14. Calcium
15. Cobalt
16. Tin
17. Niobium</td><td>• Sponge Iron
• Total Iron, Metallic iron, metallization
• Total Carbon in Sponge iron
• Sulphur
• Phosphorus</td></tr>
<tr><td>ANALYSIS OF GALVANIZED STEEL</td></tr>
<tr><td>• Analysis of mass of zinc coating
• Uniformity test
• Adherence Test</td></tr>
<tr><th>FUEL ANALYSIS</th><th>AIR POLLUTION TESTING (STACK EMMISSIONS)</th></tr>
<tr><td>• Moisture Content
• Viscosity Pre-heat Temp.
• Calorific Value (Coal or Oil)</td><td>1. CO
2. CO2
3. NOx
4. SPM
5. SO2
6. Temperature
7. Velocity</td></tr>
<tr><th colspan="2">DIRECT READING SPECTRO METER TESTINGS</th></tr>
<tr><td colspan="2">Elemental analysis of Steels & Cast Iron for 26 elements and Grade determination &Total Fe, Grade Determination/CE.</td></tr>
</table>

Mechanical & NDT Laboratory

Test/Analysis	SAFETYINSPECTION
• Tensile/Compression Test by UTM (TS, YS, % Elongation) * • Nut/Bolt Test (Tensile Type) • Bend Test* • Re-bend Test* • Double Shear Test • Drift Expanding (fortubes) • Flattening (fortubes) • Hardness Rockwell/Brinell* • Impact Testing (Izod/Charpy) * • (Room Temperature Zero and Sub Zero upto - 400C) • Erichson Cupping • Dynamic/Impact Hardness Test (SHORE)* • Ultrasonic Test • Magnaflux • Measurements of Tolerances /Dimensions • /Thickness* • Weight per unit length* • Twist(fortubes) • Rib Test* • Surface inspection of Ingots* • Pullout test* • Compression test* • Surface roughness* • Strain ageing	• Crane Testing • Chain Pulley Block • Chain Sling • Pressure vessel • Hydraulic testing of pressure vessel • Dangerous Machinery • Hydra Testing (Portable EOT) • Fork Lift • Lift

• Rvalue* • Nvalue* • Bakehardening • Y groove* • Camber • Rolling mass • Crown • Flattening* • Strain measurement* • Freedom from defect • Surface finish • Straightness workmanship • Pipe/tube ends • Hydrostatic test • Bendforstrip1800* • Crushing • Bendofwholepipe900* • Eccentricity • Fracture disc test • Crop test of bar • Cold shear ability • Deflection • Shear strength • Ageing embrittlement • Fracture toughness	

Note: (*) Marked tests conducted under NABL

TESTING OF DIFFERENT BIS PRODUCTS NOTIFIED UNDER QCO

S. No.	IS Number	Product
01.	IS210	Grey iron castings–Specification (First Revision)
02.	IS277	Galvanized steelstrips and sheets (Plain and Corrugated)–Specification (Seventh Revision)
03.	IS432: Part1	Mild Steel and Medium Tensile Steel Bars
04.	IS432: Part2	Hard-Drawn Steel Wire for Concrete Reinforcement
05.	IS513: Part1	Cold reduced carbon steel sheet and strip: Part 1 cold forming and drawing purposes
06.	IS513: Part2	Cold reduced carbon steel sheet and strip: Part 2 high tensile and multi-phase steel
07.	IS963	Chrome molybdenum steel bars and rods for aircraft purposes
08.	IS1029	Hot rolled steel strips (Baling)
09.	IS1038	Steel Doors, Windows and Ventilators
10.	IS1079	Hot rolled carbon steel sheet & strip
11.	IS1110	Ferro silicon
12.	IS1171	Ferro Manganese
13.	IS1341	Steel Butt Hinges
14.	IS1470	Silico Manganese
15.	IS1566	Steel wire fabric for concrete reinforcement
16.	IS1786	Cold–twisted steel bars for concrete reinforcement
17.	IS 2039: Part1	Steel tubes
18.	IS 2039: Part2	Steel tubes
19.	IS 2039: Part3	Steel tubes
20.	IS2062	Hot rolled low medium and high tensile structural steel

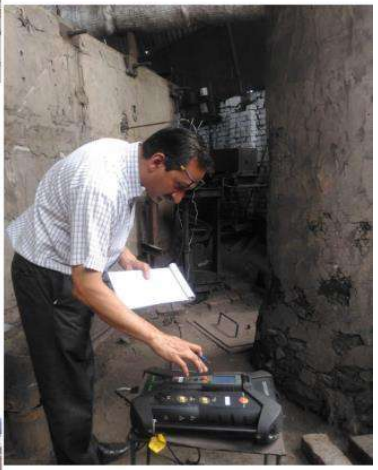
21.	IS2255	Mild steel wire rod for the manufacture of machines crews
22.	IS2385	Hot Rolled mild steel sheet and strip
23.	IS2507	Cold rolled steel strips for springs
24.	IS2830	Carbon Steel Bullets (Standard quality)
25.	IS2831	Carbon Steel Bullets (Ordinary quality)
26.	IS2879	Mild Steel for Metal Arc Welding Electrode Core Wire
27.	IS3039	Structural steel for construction of hulls of ships
28.	IS3195	Steel for the manufacture of volute and helical springs (For Railway Rolling Stock)
29.	IS3502	Steel chequred plates
30.	IS4224	Steel wire for staples, pins and clips
31.	IS4368	Alloy steel billets, bloom sands labs for forging
32.	IS4397	Cold Rolled Carbon steel strips for ball and roller bearing
33.	IS4398	Carbon Chromium steel for the balls, rollers and bearing races
34.	IS5489	Carburizing steels for use in bearing industry
35	IS5522	Stainless steel sheets and strips for utensils
36	IS5651	Steels for pneumatic tools
37	IS5986	Hot rolled steel plates, sheets, strips and flats for flanging and forming operation
38	IS6240	Hot rolled plates for LPG cylinders
39	IS6902	Steel wire for spokes
40	IS6967	Steels for electrically welded round link chains
41	IS7174	Carbon Steel tubes for use onboard ships for working pressure 0.7 to 1.7n/mm2
42	IS7283	Hot Rolled bars for production of bright bars
43	IS7494	Steel for valves for internal combustion engines
44	IS7887	Mild steel wire rod for general engineering purposes
45	IS7904	Carbon steel wire rods

46.	IS8036	Mild Steel transform er cooling tubes
47.	IS8052	Steel ingots for volute and helical springs (for railway rollingstock)
48.	IS8952	Steel ingots bloom
49.	IS9516	Heat resisting steels
50.	IS9550	Bright bars
51.	IS9962	Steel wire for needles
52.	IS10748	Hot Rolled steel scalp/strip for welded tubes and pipes
53.	S 11169: Part1	Steels for cold heading/cold extrusion applications Part 1 wrought arbon and low alloy steels
54.	S 11169: Part1	Steels for cold heading/cold extrusion applications Part 1 wrought carbon and low alloy steels
55.	IS11513	Hot rolled carbon steel strip for cold rolling
56.	IS11587	Structural weather resistant steel
57.	IS12146	Carbon manganese steel forgings
58.	IS14491	Low carbon high strength cold rolled steel sheets and coils for cold forming
59.	IS15103	Fire resistant steel
60.	IS15647	HRS Narrow width strip for welded tubes and pipes
61.	IS15914	Hight ensile strength flat rolled steel plate (UpTo6Mm) sheet
62.	IS15997	Low nickel austenitic stainless-steel sheet and strip for utensil and kitchen appliances

NISST Labs at a glance

- Chemical Testing Lab
- Mechanical Testing lab
- Metallographic testing lab
- Energy Lab

Field study undertaken by NISST



CHAPTER-3

DETAILS OF ACTIVITIES CARRIED OUT DURING 2024-25

IMPORTANT ACTIVITIES:

As per the work order by the ministry of steel. NISST conducted the following activities and survey:

1. **Green Steel Certification:** Subsequent to the notification by Ministry of Steel on Green Steel Taxonomy (copy enclosed at Annexure-1) the following activities have been undertaken by NISST to start certification from F/Y 2025-26.
   - Developed registration form in consultation with stakeholders.
   - Developed draft worksheet for calculation of tCO2/ TFS considering scope1 & scope2 and limited scope3 notified in the notificationno.CG- DL-E-13122024-259382.
   - Developed guidelines for Green Steel Certification.
   - Developed draft flow to design portal for green steel certification.
2. **GHG BASELINE STUDY:** Extended technical inputs support to JPC in drafting the tender document for GHG baseline studies of non-PAT units. Developed draft proforma for the collection of data required for the GHG baseline study and also developed report format for standardized submission of the content of report.
3. **Pan-India Survey on Skill Gap:**

- Proposal for PAN India skill gap survey was submitted by NISST with methodology that the data will be collected online through Google form.
- The draft questionnaire was submitted by NISST to ministry of steel for consideration and approval to start the work. On approval, after the inputs from the stakeholders, NISST started the survey work.

- After extensive follow-up over phone and emails, NISST has received a response from295 units with 278 completed forms.

Activities undertaken under UNDP project:

An assignment for DRI Sector under UNDP project on "Support to collectively respond to the climate emergency and establish resilient development pathways for sustaining human security and green transformation" was awarded to NISST and activities undertaken under this assignment are as below:

- Carry out energy efficiency assessment in 10 DRI Plants & conduct of consultative workshop.
- Carried out energy audits in 10 DRI units and supported in the implementation of energy efficient technologies.
- Facilitate implementation of best available technologies/measures in selected 2-4 DRI units.
- Evaluated 118 baseline and post commissioning reports for disbursement of financial incentives.
- Prepared roadmap report targeting 45% CO_2 reduction in secondary steel sector by 2030.
- Conducted 03 Dissemination workshops

S.No	Topic	Held on	Place
01	Organized stakeholder conference	8th November, 2024.	Ahmadabad
02	A stakeholder conference was convened at the Mandi Gobindgarh cluster as part of the UNDP project	24th December, 2024,	Golden Grain Club in Khanna, Punjab
03	Dissemination workshop	8th January, 2025	Coimbatore

ENERGY AUDITS:

S. No.	Name of the Unit
01	M/s. Suraj Fabrics Industries, HP.
02	M/s. Vanchinad Forgings Private Ltd., Palakkad, Kerala.

SAFETY AUDITS & TRAINING:

S. No	Name of the unit
1.	M/s Kairali TMT
2.	M/s Gasha Steels (Kalliyath Group)
3.	M/s Minar Castings (2units)
4.	M/s Siddhi Vinayak Steels
5.	M/s Chatarbhuj Alloy Private Limited, Khadoli
6.	M/s Dadra Nagar steels Pvt. Limited, Silvassa
7.	M/s Shyam Ingots Pvt Ltd- Khadoli Unit
8.	M/s Shri Balaji Castings, Khadoli, Silvassa
9.	M/s Shri Vaishno Castings, Khadoli, Silvassa
10.	M/s Balbir Metals & Power Private Limited, Silvasa
11.	M/s Balbir Rolling Mills Private Limited, Dapada
12.	M/s Shri Siddhi Ispat
13.	M/s MI Alloys
14.	M/s Shri Khatushyam alloys pvt ltd(unit-i)
15.	M/s Shri Khatushyam alloys pvt ltd(unit-ii)
16.	M/s Shri Khatushyam alloys pvt ltd (UNIT-III)
17.	M/s Shyam Ingots Pvt Ltd- Naroli Unit
18.	M/s Shree Krishna Steel Products
19.	M/s Sunland Alloys
20.	M/s Amit Industries
21.	M/s A Kumar Industries

SAFETY INSPECTION:

S. No	Name of the unit
1.	M/s Gupta Steel, Khanna
2.	M/s Vikas Industrial Corp. Khanna
3.	M/s Sanjay Solvex Pvt. Ltd Khanna
4.	M/s Satyam Industries, Khanna
5.	M/s Shiv Shakti Castings, Khanna
6.	M/s Bansal Ispat Udyog. Mandi Gobindgarh
7.	M/sBansal Alloys & Metals Limited Unit- I, Mandi Gobindgarh
8.	M/s Bansal Alloys & Metals Limited Unit-II, Mandi Gobindgarh
9.	M/s Satyam Roller Mills, Khanna
10.	M/s Satyam Agro & Allied Industries, Khanna
11.	M/s Lakshmi Steel Rolling Mills, Khanna
12.	M/s Madhuban Rolling Mills, Khanna
13.	M/s Dev Steel Industries, Khanna
14.	M/s Asian Steel Industries, Khanna
15.	M/s Dev Industries Corporation, Khanna
16.	M/s Rajbir Mill, Khanna
17.	M/s Khanna Inds, Khanna
18.	M/s AS Precision, Khanna
19.	M/s ANJ Recycling, Mandi Gobindgarh
20.	M/s Kansal Industries, Khanna
21.	M/s Prem Agro Inds., Khanna
22.	M/s GS Forging, Khanna
23.	M/s Modern Refractories
24.	M/s Goyal Malleables, Sirhind
25.	M/s Bansal Alloys (Unit-1) M.G. G

26.	M/s Bansal Alloys (Unit-2) M.G. G
27.	M/s Aggarwal Mills, Khanna
28.	M/s Kuldeep Nasseb and General Mills, Khanna
29.	M/s Ambey Mills, Khanna
30.	M/s Ambey Roller Mills, Khanna
31.	M/s A.R Agro, Khanna
32.	M/s Shiv Shakti Castings, Khanna
33.	M/s Shri Guru Dev 1008 Maharaj, Khanna
34.	M/s Nav Durga Food & Feeds, Khanna
35.	M/s Bhagwati & General Mills, Khanna
36.	M/s S.A Agro tech, Khanna
37.	M/s Arpan Industries, Khanna
38.	M/s Jindal Mills, Khanna
39.	M/s Shree Ganpati Rice & General Mills, Khanna
40.	M/s Rajshree Udyog, Mandi Gobindgarh
41.	M/s Ashok Steel Industries
42.	M/s Madhav Mills, Khanna
43.	M/s Naveen Mills, Khanna
44.	M/s Shri Durga Mills, Khanna
45.	M/s. Sharma Mills, Khanna
46.	M/s. Aujla Mill, Khanna
47.	M/s. Guru Nanak Mills, Khanna
48.	M/s Jindal Industries, Khanna
49.	M/s. Lord Ganesh Roller Flour Mills, Khanna
50.	M/s. Verma Mills, Khanna
51.	M/s. Verma Roller & Flour Mills, Khanna
52.	M/s Arti Roller Flour Industries Pvt. Ltd., Khanna
53.	M/s. Arti Aggrotech Pvt. Ltd., Khanna

54.	M/s Singla Steel & Allied Industries, MGG
55.	M/s Karam Steel Corporation, Khanna
56.	M/s S.R. Ceramics, MGG
57.	M/s Bansal Ispat Udyog, Khanna
58.	M/s Royal Ispat Udyog, M.G. G

CONSULTANCY SERVICES:

S. No	Organization	Subject
01	M/s V. K. Comcast, Ludhiana	Furnace Design of Reheating Furnace
02	M/s. Broadway Steels, Mandi Gobindgarh.	A Combustion Study
03	M/s. Shree Ganesh Steel Rolling Mills, MGG.	A Combustion Study
04	M/s. Shree Ganesh Steel Rolling Mills, Mandi Gobindgarh.	Flue Gas Analysis Study
05	M/s. Adarsh Steel Rolling Mill, Mandi Gobindgarh.	Analysis of Smoke Reheating Furnace
06	M/s. Bharat Ispat Udyog, Mandi Gobindgarh	Expert opinion
07	M/s. Jagat Steel Rolling Mills, Mandi Gobindgarh	A Combustion Study
08	M/s. Shilpa Steel & Power Ltd, Nagpur	Flue Gas Analysis Study
09	M/s. Laxmi Steel Rolling Mill, Mandi Gobindgarh	Pollution Study
10	M/s. Bhushan Steel Industries, Mandi Gobindgarh	Pollution Study
11	M/s. Jagat Steel Rolling Mills, Mandi Gobindgarh	Pollution Study
12	M/s Karam Steel Corporation, Mandi Gobindgarh	Sound Verification Study

TRAINING PROGRAMMES:

Training has been provided to total 157 students as mentioned below:

S. No.	Topic	Duration	Held on
1	Chemical Testing of Cast Iron covering theory & practical aspects	04 DAYS	SEPTEMBER, 2024
2	NDT & OTHER COURSES	UPTO 06 MONTHS	SEPTEMBER, 2024 TO MARCH, 2025
Total			

TESTINGS:

NAME OF TESTING	NO. OF TESTS
Chemical	864
Metallography	483
Mechanical	856
Safety Inspection	260
Total	2463

THIRD PARTY AUDIT OF FOLLOWING PUBLIC AUTHORITIES UNDER RTI ACT 2005 HAS BEEN COMPLETED

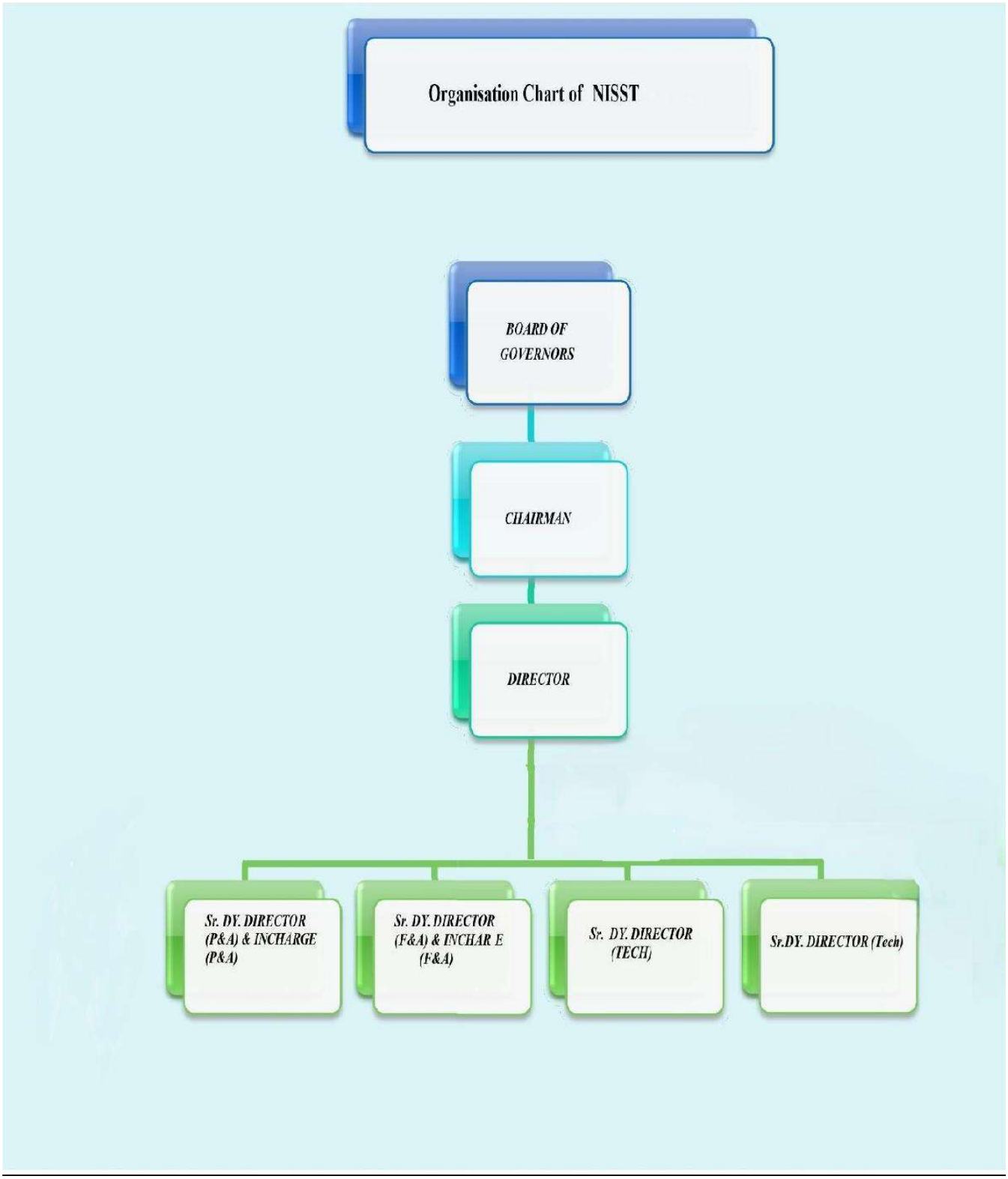
- National Aluminum Co. Ltd. (NALCO)
- Steel Authority of India Ltd. (SAIL)
- Ministry of Steel (MoS)
- Biju Patnaik National Steel Institute (BPNSI)

CHAPTER -4

MANPOWER

Regular Manpower	Contractual Manpower
EXECUTIVES	
TECHNICAL - 03 NON-TECHNICAL - 02 TOTAL - 05	TECHNICAL - 03
NON-EXECUTIVES	
TECHNICAL - 05 NON-TECHNICAL - 03 TOTAL - 08	TECHNICAL - 09 NON-TECHNICAL - 04 TOTAL - 13
TOTAL - 13	TOTAL – 16

Total strengths - 29 as on 31.03.2025


Organisation Chart of NISST
BOARD OF GOVERNORS
CHAIRMAN
DIRECTOR
Sr. DY. DIRECTOR (P&A) & INCHARGE (P&A)
Sr. DY. DIRECTOR (F&A) & INCHAR E (F&A)
Sr. DY. DIRECTOR (TECH)
Sr.DY. DIRECTOR (Tech)

CHAPTER - 5

RECEIPT & PAYMENT STATEMENT

Details of Receipts & Payments F.Y. 2024 - 25	
Receipts	**(Rupees in Lakhs)**
Technical Services	108.66
Interest Income	34.74
Revenue Grant from JPC	300.00
Revenue Grant from FSDF	50.00
Special Grant for Strengthening of NISST from JPC	172.00
Special Grant from JPCB from previous year	56.41
Total	**721.81**
Payments	
Capital Expenditure	0.27
Salary & Emp. Related Expenses	434.55
Office Running Exp.	51.69
Travelling	6.12
Payments for year 2023-24	33.80
Capital exp. For strengthening of NISST	122.50
Salary Exp. For strengthening of NISST	47.33
Total	**696.26**

List Of Members

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अधिसूचना

नई दिल्ली, 12 दिसम्बर, 2024

सा.का.नि. 763(अ).—भारत के लिए ग्रीन इस्पात वर्गीकरण सामान्य जानकारी हेतु एतद् द्वारा प्रकाशित की जाती है---

1. "**ग्रीन स्टील**" को इस्पात के ग्रीननेस प्रतिशत के संदर्भ में परिभाषित किया जाएगा, जोकि 2.2 टन कार्बन डाइऑक्साइड प्रति टन तैयार इस्पात (tfs) से कम तीव्रता वाले समकक्ष उत्सर्जन के साथ इस्पात संयंत्र से उत्पादित होता है। **इस्पात संयंत्र की उत्सर्जन तीव्रता 2.2 t-CO¬2e/tfs सीमा की तुलना में कितनी कम है, के आधार पर इस्पात की ग्रीननेस के प्रतिशत के रूप में व्यक्त किया जाएगा।**

एक संयंत्र के अंदर उत्पादित इस्पात की ग्रीननेस को मापने के लिए तकनीकी स्पष्टीकरण **परिशिष्ट-I** में दिया गया है।

2. ग्रीननेस के आधार पर, ग्रीन इस्पात का निर्धारण निम्नानुसार किया जाएगा:

फाइव स्टार ग्रीन-रेटेड इस्पात: 1.6 t-CO_2e/tfs से कम उत्सर्जन तीव्रता वाले इस्पात को फाइव स्टार ग्रीन-रेटेड इस्पात के रूप में परिभाषित किया जाएगा।**फोर स्टार ग्रीन-रेटेड इस्पात**: 1.6 और 2.0 t-CO_2e/tfs के बीच उत्सर्जन तीव्रता वाले इस्पात को फोर स्टार ग्रीन-रेटेड इस्पात के रूप में परिभाषित किया जाएगा।

थ्री स्टार ग्रीन-रेटेड इस्पात: 2.0 और 2.2 t-CO¬2e/tfs के बीच उत्सर्जन तीव्रता वाले इस्पात को थ्री स्टार ग्रीन-रेटेड इस्पात के रूप में परिभाषित किया जाएगा।

t-CO_2e/tfs से अधिक उत्सर्जन तीव्रता वाले इस्पात किसी भी ग्रीन निर्धारण के लिए पात्र नहीं होगा।

3. ग्रीन इस्पात की स्टार रेटिंग निर्धारण को परिभाषित करने की सीमा की हर तीन साल में समीक्षा की जाएगी।

4. उत्सर्जन के दायरे में तैयार इस्पात उत्पादन से लेकर स्कोप 1, स्कोप 2 और सीमित स्कोप 3 तक शामिल होंगे। स्कोप 3 उत्सर्जन में समूहन (एग्लोमेरशन) (सिंटरिंग, पेलेट मेकिंग, कोक मेकिंग सहित), बेनिफिशिऐशन, और खरीदे गए कच्चे माल तथा मध्यस्थ उत्पादों में सन्निहित उत्सर्जन शामिल होंगे, लेकिन इसमें एक इस्पात संयंत्र के अंदर और बाहर होने वाले अपस्ट्रीम खनन, डाउनस्ट्रीम उत्सर्जन और परिवहन उत्सर्जन शामिल नहीं होंगे।

5. पंजीकृत इस्पात संयंत्र के इस्पात की ग्रीन स्टार-रेटिंग खंड-3 में यथा वर्णित सीमित स्कोप-3 के साथ तैयार इस्पात उत्पादन चरण तक किए गए उत्सर्जन पर आधारित होगी।

6. नेशनल इंस्टीट्यूट ऑफ सेकेंडरी स्टील टेक्नोलॉजी (एनआईएसएसटी) माप, रिपोर्टिंग और सत्यापन (एमआरवी) के साथ-साथ इस्पात के लिए ग्रीननेस सर्टिफिकेट और स्टार रेटिंग जारी करने के लिए नोडल एजेंसी के रूप में काम करेगा।

7. ग्रीन-रेटेड इस्पात का प्रमाण पत्र में संयंत्र का नाम, तैयार इस्पात स्तर पर सन्निहित उत्सर्जन, तैयार इस्पात स्तर पर ग्रीननेस प्रतिशत, इस्पात की स्टार रेटिंग और मात्रा निर्दिष्ट होगी।

8. दिनांक 28 जून, 2023 को अधिसूचित कार्बन क्रेडिट व्यापार योजना (सीसीटीएस) के तहत, जुलाई, 2024 में 'सीसीटीएस के अधीन अनुपालन तंत्र हेतु विस्तृत प्रक्रिया' (प्रमाणन की तारीख तक संशोधित) दस्तावेज में ऊर्जा दक्षता ब्यूरो (बीईई) द्वारा प्रकाशित उत्सर्जन एमआरवी की पद्धति लागू होगी।

9. इस्पात संयंत्र अपने उत्पादों के लिए ग्रीननेस प्रमाणपत्र और स्टार रेटिंग प्राप्त करने के लिए एनआईएसएसटी के साथ पंजीकरण कर सकते हैं।

10. रजिस्ट्री के लिए, एनआईएसएसटी द्वारा प्रति इस्पात संयंत्र 10,000 रुपये की एकमुश्त राशि ली जाएगी।

11. प्रमाणन के लिए, प्रमाणित प्रत्येक 500 टन तैयार इस्पात के लिए 1,000 रुपये की राशि का शुल्क लिया जाएगा।

12. प्रमाणपत्र वार्षिक आधार (वित्तीय वर्ष) पर जारी किया जाएगा। यदि इस्पात संयंत्र अधिक बार एमआरवी का विकल्प चुनते हैं, तो आवश्यकता के अनुसार वर्ष में एक से अधिक बार प्रमाणपत्र जारी किया जा सकता है।

13. एनआईएसएसटी द्वारा ग्रीन-रेटेड इस्पात की रजिस्ट्री का रख-रखाव किया जाएगा।

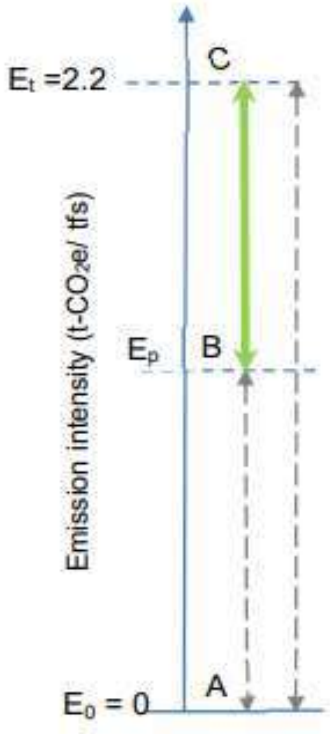
[फ़ा. सं. 1(6)-2024-ID-2]

विनोद कुमार त्रिपाठी, संयुक्त सचिव

परिशिष्ट -I

ग्रीन इस्पात वर्गीकरण का तकनीकी स्पष्टीकरण:

विचार कीजिए कि इस्पात की सीओ$_2$ समतुल्य उत्सर्जन तीव्रता को वाई-अक्ष पर दर्शाया गया है। चित्र-1 में दर्शाये गए अक्ष पर सबसे निचला सिरा (बिंदु A), शुद्ध-शून्य उत्सर्जन इस्पात ($E_0 = 0$) को दर्शाता है। संयंत्र की वास्तविक उत्सर्जन तीव्रता (E_p) को बिंदु B पर दर्शाया जाता है, बिंदु C इस्पात की ग्रीननेस को परिभाषित करने के लिए विचार किए गए उत्सर्जन तीव्रता सीमा (E_t) का दर्शाता है। उत्सर्जन तीव्रता सीमा 2.2 $CO_{2e/tfs}$ का एक निश्चित मान है।



चित्र 1

उत्सर्जन तीव्रता सीमा (E_t) से कम उत्सर्जन तीव्रता (E_p) वाला एक इस्पात संयंत्र ग्रीननेस प्रमाणीकरण के लिए निम्नानुसार होगा।

1. यदि $E_p = E_0$, तो संयंत्र को 100% हरित इस्पात का उत्पादन करने वाला माना जा सकता है।
2. यदि $E_p > E_t$ है, तो संयंत्र किसी भी ग्रीननेस वाले इस्पात का उत्पादन नहीं कर रहा है।
3. हालांकि, यदि $E_0 < E_p < E_t$, तो संयंत्र की ग्रीननेस प्रतिशत (G%) को निम्नानुसार परिभाषित किया जा सकता है:

$$G\% = \frac{|BC|}{|AC|} \times 100 = \frac{|AC - AB|}{|AC|} \times 100 = \frac{(E_t - E_p)}{E_t} \times 100 = \left(1 - \frac{E_p}{E_t}\right) \times 100$$

$$or, \quad G\% = \left(1 - \frac{E_p}{2.2}\right) \times 100$$

उदाहरण के तौर पर, ग्रीन इस्पात की परिभाषा को 2.0 t-co2e/tfs की सीओ2 समकक्ष उत्सर्जन तीव्रता (E_p) वाले इस्पात संयंत्र पर विचार करके समझाया जा सकता है। ऊपर बताई गई पद्धति के आधार पर संयंत्र द्वारा उत्पादित कुल इस्पात का ग्रीननेस प्रतिशत (G%) 9.1% होगा। इसलिए परिभाषा के अनुसार उक्त संयंत्र द्वारा उत्पादित इस्पात 9.1% ग्रीन होगा।

MINISTRY OF STEEL

NOTIFICATION

New Delhi, the 12th December, 2024

G.S.R 763(E).—The Taxonomy for Green Steel for India is hereby published for general information---

1. **"Green Steel"** shall be defined in terms of percentage greenness of the steel which is produced from the steel plant with CO_2 equivalent emission intensity less than 2.2 tonnes of CO_2 e per tonne of finished steel (tfs).**The greenness of the steel shall be expressed as a percentage, based on how much the steel plant's emission intensity is lower compared to the 2.2 t-CO_2e/tfs threshold**.

The technical explanation for measuring greenness of the steel produced within a plant is provided in **Appendix I**.

2. Based on the greenness, the steel shall be rated as follows:

Five-star green-rated steel: Steel with emission intensity lower than 1.6 t-CO2e/tfs shall be defined as five-star green-rated steel.

Four-star green-rated steel: Steel with emission intensity between 1.6 and 2.0 t-CO2e/tfs shall be defined as four-star green-rated steel.

Three-star green-rated steel: Steel with emission intensity between 2.0 and 2.2 t-CO2e/tfs shall be defined as three-star green-rated steel.

Steel with emission intensity higher than 2.2 t-CO2e/tfs shall not be eligible for green rating.

3. The threshold limit for defining star rating of Green Steel shall be reviewed every three years.

4. The scope of emissions shall include Scope 1, Scope 2, and limited Scope 3, up to finished steel production. Scope 3 emissions shall include agglomeration (including sintering, pellet making, coke making), beneficiation, and embodied emissions in purchased raw materials and intermediary products, but shall not include upstream mining, downstream emissions and transportation emissions, both within and outside the gates of a steel plant.

5. Green star-rating of the steel of the registered steel plant shall be based on emissions incurred till finished steel production stage with the limited scope-3 as described in Clause-3.

6. The National Institute of Secondary Steel Technology (NISST) shall serve as the nodal agency for measurement, reporting, and verification (MRV) as well as for issuing greenness certificates and star ratings for steel.

7. The certificate of green-rated steel shall specify plant name, embodied emissions at finished steel level, greenness percentage at finished steel level, star rating of the steel and the quantity.

8. The methodology for emissions MRV, as published by Bureau of Energy Efficiency (BEE) in the document 'Detailed Procedure for Compliance Mechanism under CCTS' in July 2024 (as amended up to date of certification), under Carbon Credit Trading Scheme (CCTS), as notified on 28 June 2023, shall be applicable.

9. Steel plants may register with NISST to obtain greenness certificates and star rating for their products.

10. For registry, a one-time amount of Rs 10,000 shall be charged per Steel Plant by the NISST.

11. For certification, an amount of Rs. 1,000 shall be charged for every 500 tonnes of Finished Steel certified.

12. The certificate shall be issued on yearly basis (financial year). In case the steel plants opt for MRV more frequently, then the certificate may be issued more than once in a year as per the requirement.

13. A registry of green-rated steel shall be maintained by NISST.

[F. No. 1(6)-2024-ID-2]

VINOD KUMAR TRIPATHI, Jt. Secy.

Appendix I

Technical explanation of Green Steel Taxonomy:

Consider that the CO_2 equivalent emission intensity of steel is represented on the y-axis. The lowest end on the axis (point A), indicated in Figure 1, represents net-zero emissions steel ($E_0 = 0$). The actual emission intensity of the plant (E_p) is represented at point B. Point C represents the emission intensity threshold (E_t) considered for defining greenness of steel. The emission intensity threshold is a fixed value of 2.2 t-CO_2e/tfs.

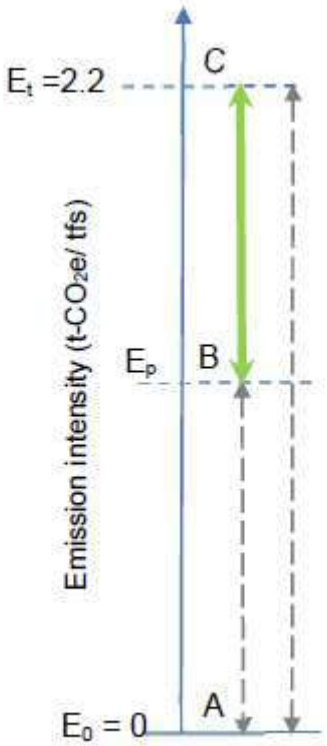


Figure 1

A steel plant with emission intensity (E_p) lower than the threshold emission intensity (E_t) shall be eligible for a greenness certification as explained below.

1). If $E_p = E_0$, then the plant can be considered to be producing 100% green steel.

2). If $E_p > E_t$, the plant is not producing steel with any greenness.

3). However, if $E_0 < E_p < E_t$, then the greenness percentage (G%) of plant can be defined as:

$$G\% = \frac{|BC|}{|AC|} \times 100 = \frac{|AC - AB|}{|AC|} \times 100 = \frac{(E_t - E_p)}{E_t} \times 100 = \left(1 - \frac{E_p}{E_t}\right) \times 100$$

$$or, \quad G\% = \left(1 - \frac{E_p}{2.2}\right) \times 100$$

As an example, the green steel definition can be explained considering a steel plant having a CO_2 equivalent emission intensity (E_p) of 2.0 t-CO_2e/tfs. The greenness percentage (%G) of the total steel produced by the plant will be 9.1% based on the methodology indicated above. Therefore, as per the definition, the steel produced by the said plant will be 9.1% green.

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