

# Independent Assurance Statement

## Introduction and Engagement

Tata Steel Limited with register office at Mumbai 400001 (hereafter 'TSL' or 'the Company') commissioned TUV India Private Limited with register office at Mumbai 400086 (hereafter 'TUVI') to conduct the independent assurance of following

- a) Consolidated GHG (Green House Gas) emissions of company, its key subsidiaries and joint ventures collectively 'Tata Steel Group' (hereafter 'TSG') which include "Limited level assurance" for reporting period 1st April 2019 to 31st March 2020
- b) GHG emissions includes direct (Scope 1), energy indirect (Scope 2) and other indirect (Scope 3) – 'scope of emissions'

This assurance engagement has been conducted against the methodology & standards of The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition) and World Steel Association CO2 emissions data collection guidelines for verification of 'TSG' GHG emissions. The verification was conducted from May 2020 to August 2020.

## Scope, Boundary and Limitations of Assurance

The scope of the assurance included the verification of scope 1, 2, and 3 GHG emissions. In particular, the assurance engagement included the following:

- Verification of the application of the input parameters, associated emission factors, and principles of calculation as mentioned in the "FY20 GHG Inventory Tata Steel Summary R7.4" sheet.
- Verification of quality of information presented in the spreadsheets over the reporting period

The Company applies the Equity-based control approach for consolidation of GHG emissions of TSG. The boundary of 2019-20 GHG inventory of TSG comprises Tata Steel Limited, its key subsidiaries and joint ventures such as integrated steel plants in India, rest of the world.

Refer the Annexure 1 for the reporting boundary of Tata steel.

## Verification Methodology

The GHG inventory of TSG has been evaluated against the following criteria:

- Adherence to the principles as prescribed in the ISO14064 and GHG protocol
- Application of the principles and requirements of the WSA "CO<sub>2</sub> emissions data submission form for worldsteel sectoral approach" (CO<sub>2</sub> data collection user guide, version 9.5)

During the assurance engagement, TUVI adopted a risk-based approach, concentrating on verification efforts on the source of GHG emissions under scope 1, 2 and 3 with limited level of GHG emissions assurance. TUVI has verified the robustness of the underlying data management system, information flow and controls. In doing so: TUVI verified the GHG emissions reported in the spreadsheets and assessed the robustness of the data management system, information flow and controls; TUVI examined and reviewed the documents, data and other information made available by TSL for scope 1, 2 and 3 GHG emissions; TUVI conducted interviews with key representatives including data owners and decision-makers from different functions at the corporate office, and representatives of TSG. TUVI verified sample-based checks of the processes for generating, gathering and managing the quantitative data and qualitative information included in the spreadsheet for the reporting period. The scope of verification comprised of the assessment of reported data, excel worksheets, monitoring tool (formatted worksheets) and processes along with exhaustive interviews with members of management, staff (responsible for data collection and processing) and representatives of TSG over the communication and collaboration platform of Microsoft Teams. Data and documents that have been provided via the dedicated worksheets were verified and found consistent with the calculations.

## Conclusions

In our opinion, based on the scope of this assurance engagement, the disclosures on GHG emissions reported in the spreadsheets adequately. During the verification we have performed, nothing has come to our attention that causes us to believe that the information subject to the assurance engagement is not prepared, w.r.t. GHG emissions (scope 1, scope 2 and scope 3), in accordance with the "CO<sub>2</sub> emissions data

submission form for worldsteel sectoral approach” (CO<sub>2</sub> data collection user guide, version 9), and GHG Protocol with regards to the reporting criteria.

Refer the annexure 1: Reporting boundary of GHG Inventory of tata steel for 2019-2020

Refer the annexure 2: GHG inventory of Tata Steel Group for 2019-2020

Exclusions:

1. GHGs other than CO<sub>2</sub> from Integrated Steel Plants (i.e. CH<sub>4</sub>, N<sub>2</sub>O, PFC, HFC, SF<sub>6</sub> and NF<sub>3</sub>) – considered to be less than 0.5%, based on detailed assessment in the past (e.g. Jamshedpur Steel Works, TSL in 2008-09), of reported gross scope 1 & 2 emissions;
2. Emissions from Raw Material (mining) operations in Canada – a joint venture (in the provinces of Quebec and Newfoundland & Labrador) – considering the ongoing activity, the emissions are estimated to be less than 0.2% of the reported gross scope 1 & 2 emissions.

TUVI did not perform any assurance of procedures on the prospective information, such as targets, expectations and ambitions. Consequently, TUVI draws no conclusion on the prospective information. This assurance statement has been prepared in accordance with the terms of our engagement. In the context of GHG reporting the following has been observed:

*Inclusivity:* The report describes the chosen approach for GHG emission accounting in a structured and transparent manner in line with the GHG protocol and World steel Association. In accordance with the requirements of its key stakeholders TSL has identified its significant emission sources within the chosen scope (scope 1, 2 and 3 emission; following the GHG Protocol definition).

*Materiality:* The principle of materiality has been considered by including all relevant GHG emission sources.

*Responsiveness:* Responsiveness is integrated into the stakeholder engagement process. GHG related information is intended to be published via CDP initiative.

TUVI expressly disclaims any liability or co-responsibility for any decision a person or entity would make based on this Assurance Statement. The intended users of this assurance statement are the management of TSL. It is further intended to be used as part of the CDP disclosure. The Management of the TSL is responsible for the information provided in the spreadsheet as well as the process of collecting; analyzing and reporting the information as presented in the worksheet, including website maintenance and its integrity. TUVI's responsibility regarding this verification is in accordance with the agreed scope of work which includes GHG emissions (scope 1, 2 and 3) disclosed by TSL in the spreadsheet. This assurance engagement is based on the assumption that the data and the information provided to TUVI by TSL are complete and true.

## **TUV's Competence and Independence**

TUVI is an independent, neutral, third-party providing carbon services, with qualified environmental and GHG verifier. TUVI states its independence and impartiality with regard to this assurance engagement. In the reporting year, TUVI did not work with TSL on any engagement that could compromise the independence or impartiality of our findings, conclusions. TUVI was not involved in the preparation of any statements or data included in the spreadsheet, with the exception of this Assurance Statement. TUVI maintains complete impartiality toward any people interviewed during the assurance engagement. TUVI did not interact with TSL or its stakeholders in any prior engagements which could impair the impartiality of the results and recommendations made in this statement.

**For and on behalf of TUV India Private Limited**



Manojkumar Borekar  
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Head – Sustainability Service  
TUV India Private Limited

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Place: Mumbai, India  
Project /Verification Reference No: 8118108945  
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## Annexure-1: Reporting Boundary of GHG Inventory of Tata Steel for 2019-20

Tata Steel applies the Equity based control approach for consolidation of GHG emissions of Tata Steel Group (TSG). The boundary of 2019-20 GHG inventory of TSG comprises Tata Steel Limited, its key subsidiaries and joint ventures such as integrated steel plants in India, Netherlands and UK; EAF based secondary steelmaking in Thailand and Singapore; various industrial activities (mining, mineral processing, coke-making, smelting, casting, downstream steel rolling & processing, fabrication, ferro-alloy making, power generation, lime calcination etc.) and international maritime services with installations spread across Belgium, France, Germany, India, Malaysia, Netherlands, Singapore, Thailand, Turkey, UK, USA and Vietnam.

### 1. Tata Steel Limited (parent company)

Key Subsidiaries	
2. Bhubaneshwar Power Private Limited	13.4. Istanbul Metal San. ve Tic. A.Ş.
3. Indian Steel & Wire Products Limited	13.5. Orb Electrical Steels Ltd
4. NatSteel Holdings Pte. Ltd.	13.6. Segal at Ivôz-Ramet
4.1. NatSteel Recycling Pte. Ltd.	13.7. Shapfell works
4.2. NatSteelVina Co., Ltd. (NSV)	13.8. Tata Steel Corby
4.3. TSN Wires Co. Ltd.	13.9. Tata Steel Heavy Gauge Decoiling
4.4. The Siam Industrial Wire Co. Ltd.	13.10. Tata Steel IJmuiden BV
4.5. Easteel Services (Malaysia) Sdn. Bhd	13.11. Tata Steel Maubeuge SAS
5. Tata Metaliks Limited	13.12. Tata Steel Packaging Recycling
6. Tata Pigments Limited	13.13. Tata Steel Shotton
7. Tata Steel (Thailand) Plc.	13.14. Tata Steel UK Limited
7.1. N.T.S. Steel Group Plc	13.15. Thomas Steel Strip Corp.
7.2. The Siam Iron and Steel (2001) Co., Ltd.	13.16. TubesNL (MOZ)
7.3. Siam Construction Steel Company Limited	14. The Indian Steel & Wire Products Limited
8. Tata Steel BSL Limited	15. Jamshedpur Engineering & Machine Manufacturing Company
9. Angul Energy Limited	16. The Tinplate Company of India Limited
10. Tata Steel Downstream Products Limited (formerly Tata Steel Processing & Distribution Limited)	17. TS Alloys Limited
11. Tata Steel Long Products Limited (includes Steel Business of formerly M/s.Usha Martin, acquired in 2019, and Tata Sponge Iron Limited)	Key Joint Ventures
12. Tata Steel Utilities and Infrastructure Services Limited (formerly JUSCO)	18. Industrial Energy Limited
13. Tata Steel Europe Limited	19. JAMIPOL Limited
13.1. Apollo Metals, Limited	20. Jamshedpur Continuous Annealing & Processing Company Private Limited
13.2. Hartlepool SAW Pipe Mills	21. Tata BlueScope Steel Pvt. Limited
13.3. Hille & Müller GmbH	22. Tata NYK Shipping Pte. Limited

## Annexure-2: GHG inventory of Tata Steel Group for 2019-20

Reporting Period: Financial year 2019-20 (01 Apr 2019 to 31 Mar 2020)

Consolidation approach: Equity-share approach

Note: all GHG emission figures in following tables represent consolidated emission on above approach.

**Table 1 Gross Global Scope 1 & 2 emissions (tonnes CO<sub>2</sub>e):**

Scope(s)	Scope 1	Scope 2 (location-based)	Scope 2 (market-based)
Value	60,116,322	2,779,523	2,908,476

**Table 2 Gross global combined Scope 1 and 2 emissions:**

Parameter(s)	Unit	Value
Consolidated Revenue	Billion INR	1,398.17 <sup>[1]</sup>
Emission (Scope 1 & 2, location based)	tonnes CO <sub>2</sub> e / Revenue (Million INR)	45.0
Emission (Scope 1 & 2, market based)	tonnes CO <sub>2</sub> e / Revenue (Million INR)	45.1

**Table 3 Gross Global Scope 3 emissions (tonnes CO<sub>2</sub>e):**

Categories	Emissions
Fuel- & Energy-Related Activities Not Included in Scope 1 or Scope 2	9,000,000
End-of-life treatment of Sold Products	2,700,000
Downstream Transportation and Distribution	2,000,000
Upstream Transportation and Distribution	2,000,000
Capital Goods	1,000,000
Processing of Sold Products	400,000
Waste generated in operations	34,000
Employee Commuting	21,000
Business Travel	10,000
Downstream Leased Assets	5,000
Purchased Goods and Services <sup>[2]</sup>	-2,200,000
Use of Sold Products <sup>[3]</sup>	-3,300,000

Note: Emission figures are rounded off to meaningful multiples of thousands considering secondary data uncertainty; conservative approach adopted

### Carbon Dioxide emissions from Biogenic Carbon relevant to Tata Steel

**NIL** (not relevant, considering the nature of business and actual operations)

**Table 4 Emissions & Energy intensities by Steel Production Process Routes:**

Steel Production Process Route(s)	Emissions intensity (tonne CO <sub>2</sub> /tcs)	Energy intensity (GJ/tcs)
Blast furnace- basic oxygen furnace	2.12	22.50
Scrap-electric arc furnace	0.60	9.13
Other (Blast furnace/Direct reduced iron-basic oxygen furnace/electric arc furnace/conarc)	2.96	33.80

Note:

- Both emission & energy intensities are based on Worldsteel's CO<sub>2</sub> Data Collection User Guide
- tcs: tonne of Crude Steel production.

**Table 5 Total Gross Global Scope 1 emissions by Greenhouse Gas type (tonnes CO<sub>2</sub>e):**

Emissions	Total Gross Global Scope 1 emissions	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	HFCs	PFC, SF <sub>6</sub> , NF <sub>3</sub>
Scope 1	<b>60,116,322</b>	59,212,336	272,924	625,515	5,547	Nil

<sup>[1]</sup> refer to page no.86 of the Integrated Report & Annual Accounts 2019-20 for full list, available at:

<https://www.tatasteel.com/media/12381/tata-steel-ir.pdf#page=45>

<sup>[2]</sup> includes 4,426,568 tCO<sub>2</sub> a/c of slag credit (worldsteel)

<sup>[3]</sup> emission offset

**Table 6 Breakdown of Total Gross Global Scope 1 & 2 emissions by Country / Region (tonnes CO<sub>2</sub>e):**

Country(ies) / Region(s)	Scope 1 emissions	Scope 2 emissions (location-based)	Scope 2 emissions (market-based)
India	45,993,122	2,336,934	2,465,887
United Kingdom of Great Britain and Northern Ireland	6,996,960	182,613	182,613
Netherlands	6,434,410	-361,682	-361,682
Singapore	376,709	119,084	119,084
Thailand	205,792	459,247	459,247
France	47,234	4,283	4,283
Belgium	23,989	6,630	6,630
United States of America	19,333	23,014	23,014
Germany	10,323	2,163	2,163
Viet Nam	4,319	3,788	3,788
Turkey	4,039	1,874	1,874
Malaysia	92	1,575	1,575
<b>Total Gross Global emissions</b>	<b>60,116,322</b>	<b>2,779,523</b>	<b>2,908,476</b>

**Table 7 Breakdown of Total Gross Global Scope 1 & 2 emissions by Business Division (tonnes CO<sub>2</sub>e):**

Business Division(s)	Scope 1	Scope 2 (location-based)	Scope 2 (market-based)
Tata Steel Standalone	29,257,861	2,797,358	3,251,417
Tata Steel Europe	13,536,288	-141,105	-141,105
Tata Steel BSL Limited	9,049,747	782,121	725,860
Tata Steel Long Products Ltd.	2,866,011	-94,423	-94,423
Industrial Energy Limited	1,425,307	286,097	286,097
Bhubaneshwar Power Private Limited	1,392,685	0	0
Angul Energy Ltd.	1,143,296	0	0
Tata Metaliks Ltd.	610,638	29,543	29,543
Tata NYK Shipping Pte Ltd.	372,914	0	0
Tata Steel (Thailand) Plc.	203,929	411,246	411,246
TS Alloys Limited	105,821	150,446	150,446
NatSteel Holdings Pte Ltd	99,357	172,448	172,448
The Tinsplate Company of India Ltd	76,442	92,317	92,317
Indian Steel & Wire Products Ltd.	30,693	37,107	37,107
Tata Bluescope Steel (JV)	14,640	18,339	18,339
Jamshedpur Continuous Annealing & Processing Company Private Limited (JV)	14,216	18,431	18,431
Tata Pigments Limited	3,097	6,042	6,042
Tata Steel Utilities and Infrastructure Services Limited	1,347	70,391	-163,629
Jamshedpur Engineering & Machine Manufacturing Company	970	8,274	8,274
Tata Steel Downstream Products Limited	189	18,615	18,615
JAMIPOL Limited (JV)	162	1,653	1,653
Inter Division adjustments	-89,288	-1,885,377	-1,920,202
<b>Total Gross Global emissions</b>	<b>60,116,322</b>	<b>2,779,523</b>	<b>2,908,476</b>

**Table 8 Breakdown of Total Gross Global Scope 1 & 2 emissions by Facility (tonnes CO<sub>2</sub>e):**

Facility(ies)	Scope 1	Scope 2 (location-based)	Scope 2 (market-based)
Ijmuiden Works (TSE), Port Talbot Works (TSE), Natsteel Singapore, 3 sites under Tata Steel Thailand (TSTh), Kalinganagar Works (TSL), Gamharia Works (TSLPL) & Others <sup>[4]</sup>	30,023,690	336,665	28,921
Jamshedpur Steel Works (TSL)	21,167,989	1,799,464	2,292,422
Angul Works, Tata Steel BSL Ltd. (TS BSL)	8,924,643	643,394	587,133
<b>Total</b>	<b>60,116,322</b>	<b>2,779,523</b>	<b>2,908,476</b>

[4] Tata Steel Long Products Limited (TSLPL), Tata Metaliks Limited, The Tinplate Company of India Limited, Bhubaneswar Power Private Limited, Industrial Energy Limited (JV) and Angul Energy Limited; Others (Tata Pigments Limited, Tata Steel Utilities and Infrastructure Services Limited, Tata Steel Downstream Products Limited, Indian Steel & Wire Products Limited, Jamshedpur

**Table 9 Breakdown of Total Gross Global Scope 1 & 2 emissions by Activity (tonnes CO<sub>2</sub>e):**

Activity(ies)	Scope 1	Scope 2 (location-based)	Scope 2 (market-based)
Iron & Steel Making	53,515,564	1,053,699	1,455,164
Power Generation	3961288	286,097	286,097
Mining & Mineral Beneficiation	1,255,712	249,480	245,813
Others	1,099,179	787,934	519,089
Ferro Alloy Making	284,579	402,313	402,313
<b>Total Gross Global emissions</b>	<b>60,116,322</b>	<b>2,779,523</b>	<b>2,908,476</b>

**Table 10 Breakdown of Total Gross Global Scope 1 & 2 emissions by Value Chain (tonnes CO<sub>2</sub>e):**

Value Chain(s)	Scope 1	Scope 2 (location-based)	Scope 2 (market-based)
Steel Value Chain	58,583,643	2,341,846	2,704,819
Non-Steel Value Chain	1,532,679	437,677	203,657
<b>Total gross global emissions</b>	<b>60,116,322</b>	<b>2,779,523</b>	<b>2,908,476</b>

**Reference:**

1. Integrated Report & Annual Accounts 2019-20 | 113<sup>th</sup> Year – Page-86 for Revenue (<https://www.tatasteel.com/media/12381/tata-steel-ir.pdf>)
2. Integrated Report & Annual Accounts 2019-20 | 113<sup>th</sup> Year – Page-306, 307 for Revenue Equity Share Holding - (<https://www.tatasteel.com/media/12381/tata-steel-ir.pdf>)
3. Global Warming Potential Values, Greenhouse Gas Protocol ([https://www.ghgprotocol.org/sites/default/files/ghgp/Global-Warming-Potential-Values%20%28Feb%2016%202016%29\\_1.pdf](https://www.ghgprotocol.org/sites/default/files/ghgp/Global-Warming-Potential-Values%20%28Feb%2016%202016%29_1.pdf))
4. Methodology:
  - a. Worldsteel's CO<sub>2</sub> Data Collection User Guide (v9.5) & relevant template 'CO<sub>2</sub> Report V24(User Guide V9.5).xlsx' for Steel Plant (previous version v9 available publicly at: [https://www.worldsteel.org/en/dam/jcr:9dd44705-6b4a-496e-8f8f-14cc1158752d/190516\\_I\\_CO2%2520Data%2520Collection%2520User%2520Guide%2520%2528v9.5%2529.pdf](https://www.worldsteel.org/en/dam/jcr:9dd44705-6b4a-496e-8f8f-14cc1158752d/190516_I_CO2%2520Data%2520Collection%2520User%2520Guide%2520%2528v9.5%2529.pdf), for effective reference for all practical purposes), and
  - b. GHG Protocol (for sites other than Steel Plants & reference for Scope-3 assessment guidance)
    - i. The GHG Protocol Corporate Accounting and Reporting Standard (<https://ghgprotocol.org/corporate-standard>)
    - ii. Scope 3 Calculation Guidance (<https://ghgprotocol.org/scope-3-technical-calculation-guidance>)
5. Standards and other references used:
  - a. IPCC Guidelines for National Greenhouse Gas Inventories, 2006 – Table 2.2, chapter 2 ([https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2\\_Volume2/V2\\_2\\_Ch2\\_Stationary\\_Combustion.pdf](https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_2_Ch2_Stationary_Combustion.pdf));
  - b. EU-ETS emission reporting regulations.