

**Greenhouse Gas Verification Statement Number  
F530101/GUR/ENV/C000072**

The inventory of Greenhouse Gas emissions in the period  
1<sup>st</sup> April 2018 – 31<sup>st</sup> March 2019 for

**Tata Steel Limited**

**Bombay House, 24 Homi Mody Street, Mumbai 400001,  
India**

has been verified in accordance with ISO 14064-3:2006 as  
meeting the requirements of

**Worldsteel Association CO<sub>2</sub> Emissions Data Collection,  
User Guide, Version 9 and WRI/WBCSD GHG Protocol – A  
Corporate Accounting and Reporting Standard**

To represent a total amount of:

**74,456,582 tCO<sub>2e</sub>**

Scope 1 : 56,093,007 tCO<sub>2e</sub>  
Scope 2 : 4,137,575 tCO<sub>2e</sub> (Location based)  
Scope 3 : 14,226,000 tCO<sub>2e</sub>

Lead Assessor: Sagar Shirsat  
Technical Reviewer: Vijay Patel

**For the following activities:**

Tata Steel Limited, its subsidiaries and joint ventures such as Integrated steel plants in India and European union 28, EAF based secondary steelmaking South East Asia Thailand, Singapore, United States of America, Turkey, and Malaysia

The organizational boundary was established following equity based control approach and the operational boundary was established to cover anthropogenic sources cause direct and indirect emissions.

Verification Statement Date: 26<sup>th</sup> July 2019

Authorised by



Nikhil Agnihotri  
Authorized Signatory,  
Environment, Health and Safety  
SGS India Private Limited  
Date: 26<sup>th</sup> July 2019

SGS India Private Limited, 226 Udyog Vihar, Phase I, Gurgaon 122 016 Haryana,  
India

This Statement is not valid without the full verification scope, objectives, criteria and findings available on pages 2 to 7 of this Statement.



## Schedule Accompanying Greenhouse Gas Verification Statement Number F530101/GUR/ENV/ C000072

### Brief Description of Verification Process

SGS has been contracted by Tata Steel Limited for the verification of direct and indirect carbon dioxide (CO<sub>2</sub>) equivalent emissions as provided by Tata Steel covering its subsidiaries and joint ventures; in their GHG inventory in the form of a GHG Assertion sheet for the period 1<sup>st</sup> April 2018 – 31<sup>st</sup> March 2019 covering CO<sub>2</sub> equivalent emissions.

Tata steel Limited & their GHG emission based on equity method tCO<sub>2</sub>e has been verified by SGS during site visit on 6<sup>th</sup> & 7<sup>th</sup> June 2019 at Tata steel Jamshedpur.

### Roles and responsibilities

The management of Tata Steel is responsible for the organization's GHG information system, the development and maintenance of records and reporting procedures in accordance with that system, including the calculation and determination of GHG emissions information and the reported GHG emissions.

It is SGS' responsibility to express an independent GHG verification opinion on the emissions as provided in the Tata Steel GHG emissions inventory covering its four integrated steel plants at Jamshedpur, Jharkhand, India; at Kalinganagar, Odisha, India; at Ijmuiden, Netherlands and at Port Talbot, United Kingdom for the period 1<sup>st</sup> April 2018 – 31<sup>st</sup> March 2019.

SGS conducted a third party verification following the requirements ISO 14064-3: 2006 of the provided CO<sub>2</sub> equivalent assertion in June 2019.

The assessment included a site visit at Tata Steel Limited, Jamshedpur Steel Works, Jamshedpur, Jharkhand, India - 831001 during 06<sup>th</sup> to 07<sup>th</sup> June 2019.

The verification was conducted based on the verification scope, objectives and criteria as agreed between Tata Steel Limited and SGS on 2<sup>nd</sup> April 2019.

### Level of Assurance

The level of assurance agreed is that of limited assurance

### Scope

Tata Steel Limited has commissioned an independent verification by SGS of reported CO<sub>2</sub> equivalent emissions arising from their activities covering Tata Steel Limited, its subsidiaries and joint ventures, Integrated steel plants in India and Ijmuiden, Netherlands, Port Talbot, United Kingdom. EAF based secondary steelmaking South East Asia Thailand, Singapore to establish conformance with the requirements of "Worldsteel Association CO<sub>2</sub> Emissions Data Collection, User Guide, Version 09" and "WRI/WBCSD Greenhouse Gas Protocol – A Corporate Accounting and Reporting Standard" within the scope of the verification as outlined below. Data and information supporting the CO<sub>2</sub> equivalent inventory were historical in nature and proven by evidence.

This engagement covers verification of emissions from anthropogenic sources of greenhouse gases included within the organization's boundary and meets the requirements of ISO14064-3: 2006.

### Title or description of activities:

- The organizational boundary was established following the equity based control approach.

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- Title or description of activities: Integrated Steel Manufacturing facility
- Location/boundary of the activities: Tata Steel Limited, its subsidiaries and joint ventures such as Integrated steel plants in India and European union 28, EAF based secondary steelmaking South East Asia Thailand, Singapore, United States of America, Turkey, and Malaysia.
- Physical infrastructure, activities, technologies and processes of the organization: Integrated steel manufacturing facility.
- GHG emissions sources, sinks and/or reservoirs or credits included:

Scope 1: Combustion / process utilization of purchased/ procured materials like Coking coal, Coke, BF injection coal, Sinter/BOF coal, Steam coal, Light oil, LPG, Burnt Lime, Propane, Limestone, Crude dolomite, Burnt dolomite, Sinter, Pellets, EAF electrodes, Gas based DRI, Nickel metal, Ferro-Chromium, Ferro-Molybdenum, Ferro-Manganese; along with sold / delivered Cold iron and process by-products covering Coal tar, Benzole, Coke Oven gas, Blast Furnace gas and Basic Oxygen Furnace gas;

Scope 1.1 (according to Worldsteel panel of experts): Direct emissions of sold/ delivered by-product gases (Coke Oven gas, Blast Furnace gas and Basic Oxygen Furnace gas);

Scope 2: Purchased/ procured electricity, sold / delivered Coke Oven gas, Blast Furnace gas, Basic Oxygen Furnace gas and Steam from site;

Scope 3: Emissions related to purchased/ procured pre-processed materials like Coke, Light oil, Pellets, Oxygen, Nitrogen, Argon, Nickel Metal, Ferro-Chromium, Ferro-Molybdenum, Ferro-Manganese; sold / delivered Cold iron and process by-products covering BF slag to cement and BOF slag to cement (as other upstream credits related to procurement / delivery of pre-processed materials / by-products from site as per the methodology of Worldsteel Association CO<sub>2</sub> Emissions Data Collection, User Guide, Version 9) for all four indicated Tata Steel integrated steel plants. Emissions related to upstream transportation of raw materials, downstream transportation of finished products for Tata Steel integrated steel plants at Jamshedpur, India; Ijmuiden, Netherlands and Port Talbot, United Kingdom. Emissions related to domestic business travels of employees (as per WRI/WBCSD Greenhouse Gas Protocol) for Tata Steel Limited integrated steel plants at Jamshedpur and Kalinganagar, India.

- Types of GHGs included: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O
- GHG information for the following period was verified: 1<sup>st</sup> April 2018 – 31<sup>st</sup> March 2019
- Intended user of the verification statement: internal and external shareholders.

#### Objective

The purposes of this verification exercise are, by review of objective evidence, to independently review:

- Whether the CO<sub>2</sub> equivalent emissions are as declared by the organization's CO<sub>2</sub> equivalent inventory
- That the data reported are accurate, complete, consistent, transparent and free of material error or omission.

**Criteria**

Criteria against which the verification assessment is undertaken are the requirements of ISO14064-3:2006.

**Materiality**

The materiality required of the verification was considered by SGS to be below 10%, based on the needs of the intended user of the GHG inventory.

**Conclusion**

Tata Steel, provided the GHG emissions data based on the requirements of Worldsteel Association CO2 Emissions Data Collection, User Guide, Version 9 and WRI/WBCSD GHG Protocol – A Corporate Accounting and Reporting Standard. The GHG information for the period 1st April 2018 – 31st March 2019 disclosing gross emissions of 74,456,582 metric tonnes of CO2 equivalent are verified by SGS to a limited level of assurance, consistent with the agreed verification scope, objectives and criteria.

Table 1 FY19 Tata Steel consolidated gross global emissions:

Parameters for Verification	Equity based
Scope 1	5,60,93,007 tCO2e
Scope 2 (Location-based)	41,37,575 tCO2e
Scope 3	1,42,26,000 tCO2e

Table 2 Gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue.

Parameters for Verification	Equity based
Revenue FY19	1,577 Billion INR
Specific Emission (Scope 1 & 2 only as required by CDP 2019)	0.000 0382 tCO2e/INR

Table 3 Break down of total gross global Scope 1 emissions by country/region

Country/Region	Scope 1 emissions (metric tons CO2e)
India	42,619,066
EU28	1,31,49,735
Thailand	192,554
Singapore	102,268
United States of America	19,377
Viet Nam	5,625
Turkey	4,291
Malaysia	91

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Table 4 Break down of total gross global Scope 2 emissions by country/region

Country/Region	Scope 2, location-based (metric tons CO2e)
India	3,397,988
EU28	99,407
Thailand	476,645
Singapore	126,797
United States of America	28,197
Viet Nam	5,095
Turkey	1,910
Malaysia	1,536

Table 5 Break down of total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
Tata Steel India	29,789,625
Tata Steel Europe	13,173,403
Tata Steel BSL Limited	8,853,730
Bhubaneswar Power Private Limited	1,283,366
Tata Metaliks Limited	608,236
Tata Sponge Iron Limited	440,154
South East Asia Operations (steelmaking & rolling in NatSteel & Tata Steel Thailand)	300,538
The Tinplate Company of India Ltd.	79,526
Tata Steel Processing and Distribution Limited	269
Others (Tata Pigment, JUSCO, ISWP, JEMCO, Tata-NYK Shipping, Industrial Energy Ltd., JCPCPL, T.S.Alloys, Jamipol, Tata Bluescope Steel)	1,564,160

Table 6 Break down of total gross global Scope 2 emissions by business division

Business division	Scope 2, location-based emissions (metric tons CO2e)
Tata Steel India	1,871,505
Tata Steel BSL Limited	1,076,395
South East Asia Operations (steelmaking & rolling in NatSteel & Tata Steel Thailand)	610,073
Tata Steel Europe	129,514
The Tinplate Company of India Ltd	93,017
Tata Metaliks Limited	27,553
Tata Steel Processing and Distribution Limited	21,336
Bhubaneshwar Power Private Limited	0
Tata Sponge Iron Limited	0
Others (Tata Pigment, JUSCO, ISWP, JEMCO, Tata-NYK Shipping, Industrial Energy Ltd., JCAPCPL, T.S.Alloys, Jamipol, Tata Bluescope Steel)	308,182

Table 7 Break down of total gross global Scope 3 emissions

Emission Sources	Scope 3 emissions (metric tons CO2e)
Downstream transportation and distribution	4409000
Purchased goods and services	4340000
End-of-life treatment of sold products	3360000
Upstream transportation and distribution	1511000
Processing of sold products	278000
Capital goods	264000
Waste generated in operations	45000
Employee commuting	10000
Business travel	9000

Emissions by scope are as follows:

SGS' approach is risk-based, drawing on an understanding of the risks associated with modeling GHG emission information and the controls in place to mitigate these risks. Our examination included assessment, on a sample basis, of evidence relevant to the voluntary reporting of emission information.

SGS concludes with limited assurance that the presented CO<sub>2</sub> equivalent inventory

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is materially correct and is a fair representation of the CO<sub>2</sub> equivalent data and information, and is prepared following the requirements of Worldsteel Association CO<sub>2</sub> Emissions Data Collection, User Guide, Version 9 and WRI/WBCSD GHG Protocol – A Corporate Accounting and Reporting Standard.

We planned and performed our work to obtain the information, explanations and evidence that we considered necessary to provide a limited level of assurance that the CO<sub>2</sub> equivalent emissions for the period 1<sup>st</sup> April 2018 – 31<sup>st</sup> March 2019 are fairly stated.

This statement shall be interpreted with the CO<sub>2</sub> equivalent presented in the GHG inventory in the form of a GHG Assertion sheet for the period 1<sup>st</sup> April 2018 – 31<sup>st</sup> March 2019.

Note: This Statement is issued, on behalf of Client, by SGS India Private Limited ("SGS") under its General Conditions for Customised Audit Services available at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. The findings recorded hereon are based upon an audit performed by SGS. A full copy of this statement, the findings and the supporting GHG Inventory Excel spreadsheet may be consulted **Jamshedpur Steel Works, Tata Steel Limited, Jamshedpur, Jharkhand-831001**. This Statement does not relieve Client from compliance with any bylaws, federal, national or regional acts and regulations or with any guidelines issued pursuant to such regulations. Stipulations to the contrary are not binding on SGS and SGS shall have no responsibility vis-à-vis parties other than its Client.