EMD/C-23/172 /22
September 22, 2022

**Member Secretary**
Jharkhand State Pollution Control Board
T.A. Division Building
HEC Campus, Dhurwa
**RANCHI- 834 004**

**Subject: Submission of Environmental Statement 2021-2022 for Tata Steel Limited - Tubes Division, Jamshedpur**

Dear Sir,

This has reference to captioned subject that we are submitting herewith the "**Environmental Statement**" for Tata Steel Limited - Tubes Division, Jamshedpur for the year 2021-2022 duly filled in the prescribed format for your kind consideration.

We trust you will find the report in order.

Thanking you

Yours faithfully,
**For Tata Steel Limited**

Anoop Srivastava

**Anoop Srivastava**
Head Environment Monitoring, Testing & Analysis (TSJ)

Enclosures as above

Copy to: Regional Officer, Jharkhand State Pollution Control Board, Jamshedpur

# ENVIRONMENTAL STATEMENT FOR THE YEAR 2021- 2022

# TUBES DIVISION
# TATA STEEL LIMITED

**Submitted by:**
**ENVIRONMENTAL MANAGEMENT DEPARTMENT**
**TATA STEEL LIMITED**
**JAMSHEDPUR-831001**

# FORM – V

## Environment Statement Report for the Year ending 31/03/2022

## PART-A

| | | | |
|---|---|---|---|
| I) | Name and address of the occupier | : | Mr. T. V. Narendran<br>Managing Director<br>Tata Steel Limited,<br>Jamshedpur-831001<br>Jharkhand |
| II) | Industry Category<br>Primary (SIC Code)<br>Secondary (SIC Code) | :<br>:<br>: | 3547<br>Not available<br>Not available |
| III) | Production capacity | : | 235000 MTPA (Standard Tubes)<br>85000 MTPA (Precision Tubes) |
| IV) | Year of establishment | : | 1954 |
| V) | Date of last environmental statement submitted. | : | September 22, 2021, vide letter no. EMD/C-23/247/21 |

# PART-B
## WATER & RAW MATERIAL CONSUMED

### i) Water Consumption ($m^3$/day)

| **Water Consumption** | During the Previous Financial year (2020-21) | During the Current Financial year (2021-22) |
|---|---|---|
| **Industrial Consumption** (Process & Cooling as Makeup water) | 605 | 480 |
| **Domestic Consumption** (as drinking water) | 46 | 246 |

| **Name of the product** | **Process water consumption per unit of product Output** | |
|---|---|---|
| | During the Previous Financial year (2020-21) | During the Current Financial year (2021-22) |
| Standard Tubes & Precision Tubes | 0.99 KL/ Tonnes | 0.68 KL/ Tonnes |

### ii) Raw Material Consumption:

| **Name of Raw Material** | **Name of the Products** | **Consumption of raw material** | |
|---|---|---|---|
| | | **2020-2021** | **2021-2022** |
| | | **MT/Yr.** | **MT/Yr.** |
| Hot & Cold Rolled Strips | Standard tubes & Precision tubes | 233356 | 272528 |
| Zinc spelter | | 1511.6 | 1870. 9 |
| Pre-flux | | 47 | 71.03 |
| Top-flux | | 37.27 | 31.54 |
| Sulphuric Acid | | 271.37 | 349.48 |
| Hydrochloric Acid | | 243 | 158.14 |

# PART-C

## POLLUTION DISCHARGED TO ENVIRONMENT / UNIT OF OUTPUT (PARAMETER AS SPECIFIED IN THE CONSENT ISSUED)

| Pollutants | Quantity of pollutants Discharged (mass/day) | | Concentrations of pollutants discharged (mass / volume) | | Percentage of variation from prescribed (standards with reasons.) |
|---|---|---|---|---|---|
| **a) WATER** | **kg/day** | | **mg/L** | | |
| | **2020-2021** | **2021-2022** | **2020-2021** | **2021-2022** | |
| TSS | NA* | NA* | 15.3 | 18.8 | -81% |
| Oil & Grease | NA | NA | 1.7 | 1.6 | -84% |
| BOD | NA | NA | 10 | 9.0 | -70% |
| COD | NA | NA | 65.8 | 84.9 | -66% |
| **b) AIR** | **kg/day** | | **mg/Nm³** | | |
| | **2020-2021** | **2021-2022** | **2020-2021** | **2021-2022** | |
| PM | 11.89 | 9.38 | 17.80 | 11.33 | -92% |

*No process effluent is being discharged outside the premises

**Ambient Air Quality (2021-22)**

| Parameter | Norm | UoM | Tube Division Near Canteen | | |
|---|---|---|---|---|---|
| | | | Max | Min | Avg |
| Particulate Matter, $PM_{10}$ | 100 | µg/m³ | 316 | 60 | 164 |
| Particulate Matter, $PM_{2.5}$ | 60 | µg/m³ | 93 | 21 | 52 |
| Sulphur Dioxide ($SO_2$) | 80 | µg/m³ | 20 | 3 | 10 |
| Nitrogen Dioxide, ($NO_x$) | 80 | µg/m³ | 43 | 16 | 33 |
| Carbon Monoxide (CO) | 2 | mg/m³ | 0.4 | 0.3 | 0.3 |
| Ammonia ($NH_3$) | 400 | µg/m³ | 98 | 12 | 66 |
| Ozone ($O_3$) | 100 | µg/m³ | 14 | 3 | 8 |
| Lead (Pb) | 1 | ng/m³ | < 5.0 | < 5.0 | < 5.0 |
| Arsenic (As) | 6 | ng/m³ | NT | NT | NT |
| Nickel (Ni) | 20 | µg/m³ | < 0.1 | < 0.1 | < 0.1 |
| Benzene ($C_6H_6$) | 5 | µg/m³ | < 0.1 | < 0.1 | < 0.1 |
| Benzo alpha Pyrene (BaP) | 1 | ng/m³ | < 0.1 | < 0.1 | < 0.1 |

# PART-D

## HAZARDOUS WASTES

**(As specified under Hazardous and Other Wastes (Management and Transboundary Movement) Amendment Rules, 2016)**

**Total Quantity Generated**

| Hazardous Wastes | Total Quantity (Tonne/year) | |
|---|---|---|
| | 2020-2021 | 2021-2022 |
| Zinc by product (Ash, Dross, Dust, Blowing) | 719 | 797 |
| Acid Residue (Hydrochloric Acid & Sulphuric Acid) | 879 | 1277 |
| Phosphating sludge | 46 | 110 |
| Chemical sludge from common industrial ETP | 38 | 48 |
| Used oil & residue containing oil | 55 | 25 |

# PART-E

## SOLID WASTES

| Sl. No. | Solid Waste | Total Quantity Generated | |
|---|---|---|---|
| | | 2020-21 | 2021-22 |
| a. | From process<br>▪ Metal finishing wastes | 11029.7 MT | 10983 MT |
| | ▪ Zinc Metal Wastes | 685.2 MT | 640.28 MT |
| b. | From Pollution Control facility | Nil | Nil |
| c. | Quantity recycled within the unit | Nil | Nil |

# PART - F

Characteristics of hazardous as well as solid wastes and their method of disposal:

| Hazardous / Solid wastes | Characteristics | Method of disposal |
|---|---|---|
| Metal Finishing Wastes | Ferrous | Waste generated in plant is being stored in impervious pits to avoid the land pollution. This waste is being collected & treated by the Govt. approved external agency who are having the state-of-the-art Waste treatment facility near the Jamshedpur. We are disposing off |

| | | |
|---|---|---|
| | | 100% of our waste in a safe and secure way. |
| Zinc Metal Wastes | Zinc compound | Collected & treated by the Govt. approved external agency who are having the state-of-the-art Waste treatment facility |
| Pickling Sludge | Acidic | Collected & treated by the Govt. approved external agency who are having the state-of-the-art Waste treatment facility |
| Phosphating Sludge | Acidic | Collected & treated by the Govt. approved external agency who are having the state-of-the-art Waste treatment facility |
| ETP Sludge | Acidic | Collected & treated by the Govt. approved external agency who are having the state-of-the-art Waste treatment facility |

## PART - G

| | |
|---|---|
| Impact of pollution control measures on conservation of natural resources and consequently on the cost of production. | • Implementing in-house innovative solution at our ETP area we have achieved zero water discharge. This has helped in getting GreenPro certification from CII. The certification has helped us position Tata Ezyfit as an environment friendly product for window & door framing applications. Water consumption has reduced from 0.99 KL/Ton in FY 21 to 0.68 KL/Ton in FY 22.<br>• Achieved reduction in CO gas consumption from 314 M Cubic Feet in FY 20 to 268 M Cubic Feet. Hence reduction in cost<br>• Achieved reduction in power consumption from 96.91 KWH/T in FY 20 to 93.55 KWH/T in FY 22 Resulted in cost reduction.<br>These show the positive impact of pollution control measures results in conservation of natural resources as well as on the cost of production. |

## PART - H

| | |
|---|---|
| Additional investment proposal for environmental protection including abatement of pollution | • One online stack emission monitoring system in 9 Ton boiler stack is going to commissioned.<br>• One AAQMS has been commissioned inside the premises.<br>• Rainwater Harvesting system is going to be commissioned |

## PART – I

| | |
|---|---|
| Any other particulars for improving in respect of environmental protection and abatement of pollution. | • Initiative taken to reduce noise inside the plant: Baby catcher at the tube collectors<br>• Dust Suppression drive inside plant Reduction in Fugitive Emission Dust<br>• 9 Ton boiler preheating by using the waste steam: Reduction in CO Gas consumption trend |