



INDIAN METALS & FERRO ALLOYS LIMITED

Date: 20.07.2023

Ref. No. IMFA(CCP-UNIT-II)/ENV/23 1362

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The Member Secretary,
State Pollution Control Board, Odisha,
Paribesh Bhawan,
A/118, Nilakanthanagar, Unit VIII,
Bhubaneswar - 751 012.


**Sub: Environmental statement of High Carbon Ferro Chrome/Charge
Chrome plant, Unit-II (2X30 MVA Furnace) for the financial year
2022-23.**

Dear Sir,

We are herewith submitting Annual Environmental Statement of High Carbon Ferro Chrome/Charge Chrome plant, Unit-II for the financial year 2022-23 for your kind information and record.

Thanking you,

Yours faithfully,
for INDIAN METALS AND FERRO ALLOYS LTD.


(B. Agarwalla)
Vice President, Head-Power Business Unit &
Executive In-Charge, Choudwar

Encl: As above.

CC : The Regional Officer,
State Pollution Control Board, Odisha,
586, Suryavihar, Link Road,
Cuttack - 753 012

FORM – V
 ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING
 31ST MARCH, 2023 (FOR HIGH CARBON FERRO CHROME PLANT, UNIT-II)

PART – A

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|--|---|
| i. Name & address of the owner/occupier of the industry operation or process | Chitta Ranjan Ray
Whole Time Director
Indian Metals & Ferro Alloys Ltd.,
Rasulgarh,
Bhubaneswar – 751 010 |
| ii Industry category | Primary (STC Code) , Major, CK- 650
Secondary (STC Code) |
| iii Production capacity | High Carbon Ferro Chrome (HCFC)
2X30 MVA Furnace-96000MTPA |
| iv. Year of establishment | 2005(CCP-2 Furnace)/ 2010 (CCP-3 Furnace) |
| v. Date of the last environmental statement submitted | 25-07-2022 |

PART – B

Water and Raw Material consumption:

- | | |
|---|-----------------------------|
| i. Water consumption (For 2X30 MVA): (M ³ /day) | |
| Process | NIL |
| Cooling | 423.01 M ³ /day |
| Domestic
(IMFA, Choudwar) | 1087.28 M ³ /day |

Name of the products/ Generation	Process water consumption per product output	
	During the previous financial year	During the current financial year
High Carbon Ferro Chrome	Water is not used in the process	Water is not used in the process

ii. Raw material consumption: (CCP-2 Furnace)

Name of the product	Name of the raw material	Consumption of raw material per unit output (in MT)	
		During the previous financial year 2021-22	During the current financial year 2022-23
High Carbon Ferro Chrome Chrome (HCFC)	i. Chrome Ore	2.446	2.515
	ii. Coke&Coal	0.489	0.495
	iii. Quartzite	0.138	0.118
	iv. Bauxite	0.121	0.150
	v. Magnesite	0.000	0.000
	vi. Molasses	0.092	0.078
	vii Lime	0.046	0.041
	viii. Carbon Paste	0.015	0.015

iii. Raw material consumption: (CCP-3 Furnace)

Name of the product	Name of the raw material	Consumption of raw material per unit output (in MT)	
		During the previous financial year 2021-2022	During the current financial year 2022-23
High Carbon Ferro Chrome (HCFC)	i. Chrome Ore	2.439	2.507
	ii. Coke&Coal	0.489	0.496
	iii. Quartzite	0.129	0.126
	iv. Bauxite	0.127	0.156
	v. Magnesite	0.000	0.000
	vi. Molasses	0.089	0.081
	vii Lime	0.044	0.044
	viii. Carbon Paste	0.015	0.015

PART - C

Pollution discharged to environment per unit of output (Parameters as specified in the consent issued)

Pollutants	Quantity of pollutants discharged in (mass/day)	Concentrations of pollutants discharged (mass/volume)	Percentage of variation from prescribed standard with reason
a) Water : Cooling water is completely recycled. Since the gas cleaning plant attached to the furnace is dry system having bag filters to clean process gas, there is no generation of effluent from the industry.			
b) Air (CCP-2 Furnace) :			
i. Particulate matter	314.9 Kg/day	50 mg/Nm ³	N.A.
ii. Sulfur Dioxide	N.A.	N.A.	N.A.
Air (CCP-3 Furnace):			
i. Particulate matter	303.5 Kg/day	49 mg/Nm ³	N.A.
ii. Sulfur	N.A.	N.A.	N.A.

PART – D

Hazardous Wastes (CCP-2 and CCP-3 Furnaces)

(As specified under Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 and amendment thereof.

Hazardous wastes	Total quantity	
	During previous financial year 2021-22	During current financial year 2022-23
a. From process	Used Oil : 630 liters generated and disposed 630 liters Balance qty: Nil	Used oil: 1.45 T(1630liters) generated and disposed 1.45T(1630liters) Balance qty: Nil
	Waste or residue containing oil 198 Kg generated and disposed. Discarded containers contaminated with hazardous wastes: 0.06T generated and given to recyclers.	Waste or residue containing oil 450 Kg generated and disposed. Discarded containers contaminated with hazardous wastes: 0.16T generated and given to recyclers.
b. From pollution control facilities	GCP residue: 4598 MT recycled	GCP residue:4537 MT recycled

PART – E

Solid wastes: (1 st and 2 nd furnaces)	Total quantity	
	During previous financial year 2021-22	During current financial year 2022-23
a)From process	Ferro Chrome Slag 1,08,398 MT	Ferro Chrome Slag 1,18,170 MT
b)From pollution control facilities	NA	NA
c) 1. Quantity re-cycled or re-utilized within the unit	890 MT(in making roads, concrete yards etc.)	2605 MT(in making roads, concrete yards etc.)
2. Sold	NA	NA
3. Disposed	1,19,664 MT	1,12,764 MT (including previous stock)

PART – F

A. Hazardous wastes are disposed as per the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 and amendment thereof.

B. Characteristics (in terms of concentration and quantum) of solid waste.

Ferro chrome slag which is in lumpy form dumped in dump yard of Unit outside plant premises.

Characteristics:

Ferro chrome slag

Parameters	Result (%)
Cr ₂ O ₃	10-12
SiO ₂	27-32
MgO	23-29
Al ₂ O ₃	22-25
CaO	5-7
FeO	3-5

PART – G

Impact of the pollution control measures on conservation of natural resources and consequently on the cost of production.

Full fledged gas cleaning plant of modern design with adequate capacity has been installed at both the furnaces to clean process gas generated from the furnace. Bag filters were installed at Briquette plants of both the furnace to control dust emission during operation.

Final dust of gas cleaning plant is collected from silo through telescopic chute to control fugitive emission and transported to Briquette plants for recycling with chrome ore fines in manufacturing of chrome ore briquettes.

In-plant control measures, Dust Extraction System and De-Dusting System with Bag Filters, Dry-fog dust suppression system, Fume Extraction system have been installed at vulnerable sources of fugitive emission.

Waste water utilization is continuing in regular activities like metal and slag cooling, product processing, Jigging operation, road sprinkling, dust suppression, gardening etc.

Cooling water is completely recycled and cooling towers blow-down is treated in ETP and recycled.

The following measures have been taken in the **financial year 2022-23** for improvement of environmental performance.

1. Surveillance IP camera has been installed to monitor the stacks and fugitive emission in compliance to 5T initiatives of Govt. of Odisha.
2. Heavy duty industrial vacuum cleaner installed at briquetting plant 2 and 3 in order to control the fugitive dust emission.
3. Modification of existing tapping fume extraction blower from 35000 Cum/h to 49000 Cum/h with a capacity of 150 mmWc static pressure is completed at CCP 3.
4. A new shed of dimension aprx. 42mX32m is constructed for product processing yard.
5. Another new storage shed of dimension aprx. 20mX10m is constructed near GCP area.

PART – H

Additional measure/investment proposal during FY 2023-24 for environmental protection including abatement of pollution and prevention of pollution.

1. Total 2 nos of 30 kw motor will be replaced in place of 37 kw at GCP 3.
2. 2 nos AC m/c will be replaced with new AC having ods free gas i.e., R410 in place of R22.
3. Like every year, Plantation activity will be carried out inside and outside of the plant premises.

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