

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
EASTERN ZONAL BENCH AT KOLKATA**

ORIGINAL APPLICATION NO. 106/2025/EZ

IN THE MATTER OF:

News Item Titled "Villagers Demanding
Shifting of Silicon Factory from Niglok
IGC Appearing in The Arunachal Times
dated
28.04.2025"

...Applicant

versus

Deputy Commissioner
East Siang & Ors.

...Respondents

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REPRESENTED BY:

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**PLACE: KOLKATA
DATE: __.11.2025**

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...Respondents

**REPLY ON BEHALF OF THE RESPONDENT NO. 5 (M/S
AETHER ALLOYS LLP) TO THE ARTICLE DATED 28.04.2025.**

IT IS RESPECTFULLY SUBMITTED AS FOLLOWS:

1. That the Principal Bench of the National Green Tribunal, New Delhi on 13.05.2025 registered an Original Application being Original Application No. 233/2025 *suo-motu* on the basis of the news item titled "*Villagers demanding shifting of silicon factory from Niglok IGC appearing in The Arunachal Times dated 28.04.2025*".
2. For convenience, the observations of the Tribunal in its Order dated 13.05.2025 are quoted verbatim as follows:

"1. This original application is registered suo-motu on the basis of the news item titled "Villagers demanding shifting



of silicon factory from Niglok IGC appearing in The Arunachal Times dated 28.04.2025"

2. The matter relates to air and water pollution allegedly caused by a silicon factory located in the Niglok Industrial Growth Centre (IGC), near Ruksin town in East Siang district, Arunachal Pradesh.

3. According to the news item, the factory-operated by M/s Aether Alloys LLP is reported to be adversely affecting the health and livelihoods of nearby communities. The article further states that M/s Alloy Craft LLP and M/s Arunachal Ferro Alloy have applied to the state's Industry Department to set up two additional silicon factories in the Niglok IGC, which the local villagers strongly oppose.

4. Additionally, the news item mentions that while establishing the existing silicon factory, the industrial authorities obtained consent from local gaon burahs without informing them of the implications of the industrial unit. Moreover, no public hearing was conducted, nor was an environmental impact assessment carried out with the involvement of local villagers and other stakeholders. The IGC Pollution-Affected People's Forum has also alleged gross violations of the Factories Act, 1948, by the silicon factory operated by M/s Aether Alloys LLP in Niglok IGC.

5. The above matter indicates violation of the Environment (Protection) Act, 1986, Air (Prevention and Control of Pollution) Act, 1981, Water (Prevention and Control of Pollution) Act, 1974.

6. The news item raises substantial issues relating to compliance of the environmental norms and implementation of the provisions of scheduled enactment.

7. Power of the Tribunal to take up the matter suo-motu has been recognized by the Hon'ble Supreme Court in the matter of "Municipal Corporation of Greater Mumbai vs. Ankita Sinha & Ors." reported in 2021 SCC Online SC 897.



8. Hence, we implead the following as respondents in the matter:

i. Deputy Commissioner, East Siang District
O/o Deputy Commissioner, Pasighat, East Siang District,
Arunachal Pradesh 791102

ii. Arunachal Pradesh State Pollution Control Board,
Through it's Member Secretary
Paryavaran Bhawan, Yupia Road, Papu Nalah,
Naharlagun, Arunachal Pradesh-791110

iii. Central Pollution Control Board (CPCB), Through its
Member Secretary
Parivesh Bhawan, East Arjun Nagar, Delhi-110032

iv. Ministry of of Environment and Forest, Climate Change,
Regional Office, Shillong
Law-U-Sib, Lumbatngen, Near MTC Workshop, Shillong

9. Issue notice to the above respondents for filing their response/reply by way of affidavit before the Eastern Zonal Bench of the Tribunal at least one week before the next date of hearing. If any respondent directly files the reply without routing it through his advocate then the said respondent will remain virtually present to assist the Tribunal.

10. Since the matter relates to the Eastern Zonal Bench, Kolkata, therefore OA is transferred to the Eastern Zonal Bench for appropriate further action. Let the original record of this OA be transferred to the Eastern Zonal Bench, Kolkata.

11. List before Eastern Zonal Bench at Kolkata on 21.07.2025.”

3. It is respectfully submitted that the article dated 28.04.2025 has raised direct allegations against the project of the Respondent No. 5 herein. Subsequently, on an Application moved by the



Respondent herein, the Respondent herein has been impleaded as Respondent No. 5 in the present case *vide* the Order of this Hon'ble Tribunal dated 21.07.2025.

4. It is respectfully submitted at the very outset that the Respondent No. 5 herein denies each and every allegation levelled against it in the article dated 28.04.2025. The Respondent No. 5 is in full compliance with all rules and regulations as applicable to the project. The Respondent No. 5 has also received all requisite environmental permissions necessary for the establishment and operation of the Plant.

BACKGROUND OF THE PROJECT

5. The Respondent No. 5, **M/s Aether Alloys LLP** is a Limited Liability Partnership Firm formed under the Limited Liability Partnership Act, 2008, incorporated on 7th December, 2017, vide LLP Identification Number: AAL-3376 by converting the Company, M/s Aether Alloys Private Limited into an LLP. The main object of the LLP is to deal with and manufacture of Ferro Alloys.



6. The Respondent No. 5 aims to revolutionize the alloy industry by integrating cutting-edge technology with sustainable practices, delivering superior quality products that meet the highest performance standards while minimizing environmental impact. It envisions becoming the cleanest and greenest manufacturer of ferro silicon in Asia, establishing a distinct identity in both domestic and global markets by offering cost-effective products and fostering industry growth.
7. It is submitted that Ferro-alloys are one of the important inputs in the manufacture of alloys and special steel. They are used as deoxidizers and alloy additives in the steel manufacturing process. They impart special properties to steel. The alloys provide increased resistance to corrosion, improve hardness and tensile strength at high temperature, give wear and abrasion resistance and increases creep strength, etc. The principal ferro-alloys are chromium, manganese and silicon. The product series consists mainly of ferro-manganese, silico-manganese, ferrosilicon and ferro-chrome.



8. It is submitted that the project in question is a greenfield Ferro Alloys project in the Industrial Growth Centre, Niglok-Ngorlung, East Siang Dist., Arunachal Pradesh with a capacity of 2 x 9 Mva Furnace (15,000 Metric Tonnes of Ferro Silicon per annum.) The project cost is envisaged at Rs. 143.38 Crores. The LLP has procured land on lease measuring 59,000 square meters from the Arunachal Pradesh Government at Industrial Growth Centre, Niglok-Ngorlung, East Siang Dist., Arunachal Pradesh for a period of 50 years (as per the Arunachal Pradesh State Industrial Policy, 2008), for setting up its Unit. This land is part of a centrally sponsored scheme developed under the Ministry of Industries & Commerce, Government of India, but the operational control and leasing are handled by the State Government. Furthermore, the Respondent No. 5 herein provides direct employment to over 300 individuals, contributing substantially to local economic development. The Respondent No. 5 has till date invested approximately Rs. 208 crores into the project. A true copy of the Detailed Project Report of the Plant is annexed herewith as **ANNEXURE R-5/1.**



9. It is also not out of place to mention at this stage that the Project of the Respondent No. 5 is only utilizing hydroelectric power as its power source. A true copy of the Green Energy Certificate dated 22.01.2025 issued by Department of Power, Government of Arunachal Pradesh is annexed herewith as *ANNEXURE R-5/2.*

10. It is also extremely pertinent to point out that in line with the ethos of the Respondent No. 5 and its partners to always ensure absolute compliance with environmental law and minimize environmental impact from operations, the Plant in question has been installed with state of the art Pollution Control Equipment supplied by Thermax Limited. The Thermax Group is an INR 6,123 (876 million US\$) crore engineering company well known in the industry for providing solutions in the areas of energy and environment. Their solutions specifically focus on: Heating equipment - using a variety of fuels, including biomass; Absorption chillers - fired by waste heat or steam; Power and captive cogeneration plants; Waste heat recovery units; Waste water management systems – pre-treatment, waste water treatment and chemical conditioning of water, sewage effluent treatment and



recycling; Air pollution control systems; Performance improving chemicals, etc.

11. The pollution control equipment includes a Gas Cleaning Plant (GCP), the guaranteed parameters of which, measured at full load of the furnace and at specified volumes as mentioned in the technical specifications, result in overall emissions of less than 25 mg/Nm³ and work zone emissions of 2 mg/Nm³. This results in a virtually smokeless discharge from the plant. A true copy of the relevant design and technical parameters dated 01.11.2018 of the Gas Cleaning Plant (GCP) installed is annexed herewith marked as **ANNEXURE R-5/3.**

12. The Plant was commissioned and commercial production commenced on 10th December 2024 with two submerged arc furnaces having 9 MVA Capacity each to produce Ferro Silicon with a production capacity of 1500 MT per month. The key milestones leading up to this achievement are as follows:

- (i) Power Transmission Line: Successfully charged on 19th November 2024, ensuring readiness of power supply for operations.



- (ii) Furnace Reheating and Auxiliary Checks: Wood fire reheating process initiated with auxiliary operation checks.
- (iii) Furnace Startup: Furnace-1 operational from 10th December 2024.
- (iv) Furnace Startup: Furnace-2 operational from 10th January 2025.
- (v) GCP-1 (Gas Cleaning Plant) successfully commissioned and running from 26th March 2025.
- (vi) GCP-2 (Gas cleaning Plant) experienced breakdown due to damage of the ID fan impeller shaft from 27th March 2025.
- (vii) GCP-2 (Gas Cleaning Plant) successfully commissioned and running from 3rd June 2025 after replacement of ID fan impeller shaft.

PRODUCTION PROCESS AND PRODUCT SPECIFICATIONS

13. The plant run by Respondent No. 5 has been set up with a Submerged Electric Arc Furnace. As per the process and machinery set up and commissioned by Respondent No. 5, electrical energy is converted to heat energy using a step-down transformer. There are three (3) Soderberg electrodes formed by casing and electrode carbon paste through which current flows for

smelting the charge to produce Ferro Silicon. The raw materials required include Quartz, Charcoal / semicoke / Coke, and Mill Scale / Iron Scrap. These raw materials are mixed in the required proportion for each batch in the Batch Weighing System and are fed into the furnace through hoppers as needed.

14. During smelting, the SiO_2 in Quartz and FeO in Mill Scale are reduced by the carbon from reductants (Charcoal, Lam Coke, and semicoke) to form Ferro Silicon metal. Typically, 2–3% slag forms due to raw material impurities. Under normal conditions, for every 10–12 MWH of power consumed, Ferro Silicon metal is tapped by opening the tap hole using oxygen lancing and poking with M.S. Rounds. The molten metal is collected into ladle and pour into beds to form cakes. After cooling, the metal cakes are crushed into the required size for dispatch, as per customer specifications.

15. The Chemical Analysis of the finished product is as follows:

- Silicon (Si): 70 – 75%
- Iron (Fe): 23 – 27%
- Aluminum (Al): 1.5% Max.
- Carbon (C): 0.20% Max.
- Phosphorus (P): 0.05% Max.



- Sulphur (S): 0.005% Max.
- Calcium (Ca): 0.5% Max.

16. It is submitted that the Respondent No. 5 herein operates with its own production protocol, batch handling system, and engineering team. All designs, safety standards, environmental controls, and electrical installations are tailored to the Company's facility-specific requirements and are in accordance with applicable industrial and electrical safety laws.

17. It is further submitted that the Respondent No. 5 herein is committed to sustainable industrial practices. Surrounded by lush green forests and situated in the picturesque region of Arunachal Pradesh, the company takes pride in maintaining environmental harmony while operating a modern ferroalloy manufacturing facility. As already described in detail above, the use of GCP (Gas Cleaning Plant) technology plays a critical role in reducing industrial emissions, ensuring compliance with environmental standards. This technology captures and filters harmful particulate matter before it is released, thereby minimizing the plant's environmental footprint. A true copy of photographs showcasing

the site infrastructure, surrounding green landscape, and aerial views of the state-of-the-art plant campus are annexed herewith as **ANNEXURE R-5/4.**

PERMISSIONS RECEIVED FROM RELEVANT AUTHORITIES

18.It is once again reiterated that the Respondent No. 5 is in full compliance with all rules and regulations as applicable to the project. The Respondent No. 5 has also received all requisite environmental permissions necessary for the establishment and operation of the Plant. The same are listed as follows:

- (i) Consent Order dated 14.12.2018 for the period 14.12.2018 to 13.12.2020 issued by the Arunachal Pradesh State Pollution Control Board (A.P.S.P.C.B.) (**ANNEXURE R-5/5**)
- (ii) Consent Order dated 24.08.2021 for the period 14.12.2020 to 13.12.2023 issued by the Arunachal Pradesh State Pollution Control Board (A.P.S.P.C.B.) (**ANNEXURE R-5/6.**)
- (iii) Consent Order dated 22.02.2024 for the period 14.12.2023 to 13.12.2026 issued by the Arunachal Pradesh State

Pollution Control Board (A.P.S.P.C.B.) (*ANNEXURE R-5/7.*)

- (iv) No Objection Certificate dated 04.05.2018 issued by the Ngorlung Gaon Panchayat. (*ANNEXURE R-5/8*)
- (v) No Objection Certificate being Memo No. PFD/8-7/MISC/2013/Pt-I/ issued by the Divisional Forest Officer, Pasighat Forest Division, Pasighat. (*ANNEXURE R-5/9*)
- (vi) No Objection Certificate dated 05.12.2021 issued by the Department of Industries, Government of Arunachal Pradesh. (*ANNEXURE R-5/10*)
- (vii) No Objection Certificate for Ground Water Abstraction dated 05.09.2024 issued by the Central Ground Water Authority (C.G.W.A.) (*ANNEXURE R-5/11*)
- (viii) No Objection Certificate dated 11.06.2018 issued by the Addl. Deputy Commissioner (Ind.), Ruksin, East Siang District (A.P.) (*ANNEXURE R-5/12*)

19. It is also not out of place to mention that the Central Pollution Control Board (C.P.C.B.), pursuant to a request by A.P.S.P.C.B. and the present proceedings pending before this Hon'ble Tribunal, has recently carried out a surprise site inspection and monitoring

of ambient air, noise monitoring & stack monitoring of Plant of Respondent No. 5 herein between 23rd September, 2025 to 25th September, 2025 and has also prepared a Final Report dated 06.10.2025. The C.P.C.B. has specifically observed that *“the industry has installed highly efficient air pollution control devices to maintain emission concentration below 25mg/Nm³ against the applicable standard of 150mg/Nm³ and the Industry is able to bring down its PM emission level to less than 5mg/Nm³. The industry has installed online continuous emission monitoring system (OCEMS), which was found in working condition.”* It has also found all effluents well within environmental and legal norms.

20. The Report further affirms the fact that the unit operates a scientifically designed Air Pollution Control Devices (APCD) comprising of air cooling system, multi cyclones and bag house system. The APCD, namely gas cleaning plant (GCP), is designed and installed by M/s Thermax Ltd., which is a reputed OEM in the field of manufacturing of APCD. It is observed that the GCP is designed to achieve a PM concentration level at discharge point at 25mg/Nm³ against the industry specific emission standard of 150mg/Nm³. The unit has installed pneumatic conveyor system to

collect the dust collected from the bag filter hopper. A flue dust densifier is also being installed by the unit as a value addition measure for proper collection and disposal of flue dust collected through the APCD. The unit has installed a chimney of 40M high, connected to the discharge point of APCD, to release the treated emission. Proper monitoring platform and sampling porthole have been provided by the unit.

21. The board has further observed that the raw material feeding point at the electric submerged arc furnace is the main source of fugitive emission in a ferro silicon industry and that M/s Aether Alloys LLP installed proper coverage around the material feeding point of the furnace with efficient suction system to control the fugitive emission. The suction duct is connected to the APCD device without any leakage. Tapping of molten metal generates fugitive emission in such an industry. However, for the instant case, the industry has installed proper fugitive emission control system through efficient suction and connecting the ducts to the APCD.

22. It was also specifically observed that the Ambient Air Quality Standards with respect to PM 2.5, PM 10, SO₂ and NO₂ were well within the National Ambient Air Quality Standards. A true

copy of the Report of the C.P.C.B. dated 06.10.2025 is annexed herewith as ANNEXURE R-5/13.

23. It is further submitted that a number of environmental safe guards have been adopted by Respondent No. 5 beyond the requirements as mandated by law. The same are set out herein below:

- (i) *Furnace Area:* During smelting inside the furnace, gases coming out of the furnace carry dust which causes pollution. To remove dust from the gases, Gas Cleaning Plant with bag filters have been installed and the same is being efficiently operated round the clock.
- (ii) *Furnace Gas Cleaning Process:* Gases coming out from the furnace, having a temperature of 300-350 degree Celsius, are sucked through Gas cleaning Plant's duct located above the furnace. This gas is taken to a FD (Forced Draft) cooler where temperature is reduced to nearly 100-120 degree Celsius. Gases from the FD cooler go to the Bag filter unit (polyester needlefelt bags), for filtration of dust generated. The clean gas after bag filtering is vented to atmosphere through a stack of 40 meters height. The dust from the bag filter hoppers is diverted to a storage Silo through pneumatic transport system. The clean gas contains about



20-25 mg of particulate matter per normal cubic meter which is well below the ambient air quality standards.

- (iii) *Tapping Fumes Cleaning*: During metal tapping from the taphole, fumes from the furnace escape through the taphole. These fumes also taken for cleaning at the plant. A fume extraction system is located above the taphole to extract fumes from the tapping area and this fume chamber is connected to the gas cleaning plant main suction duct to extract dust from the tapping fumes.
- (iv) *Solid Waste Disposal*: On average about 160 kilograms of dust per tonne of Ferrosilicon is generated and this dust is disposed off to cement plants and other brick making units after densification of the dust. Also, very small quantity of (roughly 50 kilograms per tonne of Ferrosilicon) slag is generated during tappings and it forms a layer, on the surface of the ferrosilicon liquid metal. This is chipped off manually and the chippings are stored in the waste storage yard. This slag which is having some ferrosilicon metal contamination is used in foundries and some ferroalloys Industries. Respondent No. 5 herein is regularly disposing this off by selling to these Industries.

- (v) *Water pollution Control Measures:* The water coming out from the cooling of furnace equipment is recycled into the process after cooling and addition of makeup water. In this way there is no chance of any water pollution.

NO REQUIREMENT OF ENVIRONMENT CLEARANCE
AND PUBLIC HEARING AS PER LAW

24. An allegation raised in the article dated 28.04.2025 against the Plant of Respondent No. 5 is that no public hearing was held nor an Environmental Clearance obtained before commissioning the plant.

25. At the outset, it is emphatically denied that there has been any violation of the law in this regard.

26. It is respectfully submitted that as per law, there is NO requirement of conducting a Public Hearing or obtaining an Environmental Clearance before setting up and commissioning the Plant of the Respondent No. 5 herein. It is pertinent to mention at this stage that the C.P.C.B., in its Reply Affidavit dated 18.07.2025 filed before this Hon'ble Tribunal, has also affirmed the position being canvassed by the Respondent No. 5 herein.

27. It is submitted that under the Environment Impact Assessment (EIA) Notification of 2006, an Environment Clearance (EC) is not required for standalone ferro alloys plants with a capacity below 30,000 tonnes per annum (TPA). According to the EIA Notification of 2006 (Schedule, Clause 3(a)), secondary metallurgical processing units producing non-toxic metals do not need an EC if their capacity is below 30,000 TPA. As a consequence, there is also no need to carry out a public hearing in terms of the above mentioned notification.

PRAYER

28. It is, therefore, prayed that this Hon'ble Tribunal be pleased to dismiss the present application and thus render justice.

REPRESENTED BY:

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PLACE: KOLKATA
DATE: 17.11.2025

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...Respondents

AFFIDAVIT

I, Karan Sharma, aged about 37 years, Partner, Aether Alloys Ltd., S/o Niraj Sharma, R/o House No.604-B. Bravelly Park-I, M.G. Road, DLF Phase-2, Chakarpur (74), Farrukhnagar, Gurgaon-122002, do hereby solemnly affirm and declare as under:

1. That I am the Authorised Representative of the Aether Alloys LLP, the Respondent No. 5 in the captioned matter and as such I am competent to swear the instant Affidavit.
2. That I have read the contents of the accompanying Reply and say that the facts stated therein are true and correct as per the records maintained by the answering Respondent and that nothing material has been concealed therefrom.



3. I state that the annexures are true copies of the originals.



DEPONENT

VERIFICATION

I, the deponent above named, do hereby verify on this ___ day of November, 2025 that the contents of this affidavit are true and correct as per the records maintained by the answering Respondent. No part of this affidavit is false and nothing material has been concealed therefrom.



DEPONENT



3. PROJECT OVERVIEW

Aether Alloys LLP (AA LLP) is a Limited Liability Partnership Firm formed under The Limited Liability Partnership Act, 2008, incorporated on 7th day of December, 2017, vide LLP Identification Number: AAL-3376 by converting the Company, M/s Aether Alloys Private Limited into an LLP. The main object of the LLP is to deal with and manufacture of Ferro Alloys. The LLP is implementing a greenfield Ferro Alloys (Unit I) project in Industrial Growth Centre, Niglok-Ngorlung, East Siang Dist., Arunachal Pradesh 781102 with a capacity of 2 x 9 Mva Furnace (15,000 Metric Tonnes of Ferro Silicon per annum) in Unit I. The LLP has also started work on its Unit II plant which will have a 21 Mva furnace (18,000 MTPA). **This TEV deals with 2 x 9 Mva Furnace (15,000 Metric Tonnes per annum of Ferro Silicon).**

The project cost is envisaged at Rs. 143.38 Crores and is proposed to be by way of Term Loan from Banks amounting to Rs.80.00 Crores at a Debt: Equity ratio of 1.26 : 1. The balance amount will be funded by the promoters by way of Capital.

The Unit will have installed capacity of 15,000 Metric Tonnes of Ferro Silicon per annum.

The LLP has procured land on lease measuring 59,000 square meters from the Arunachal Pradesh Government at Industrial Growth Centre, Niglok-Ngorlung, East Siang Dist., Arunachal Pradesh 781102 for a period of 50 years (as per the Arunachal Pradesh State Industrial Policy, 2008), for setting up its Unit.

Project Rationale:

Aether Alloys LLP proposes to manufacture Ferro Silicon (70-75 grade). The rationale for setting up the plant, can be explained as under:

Power: Ferro Alloys industry is a very power intensive industry. Ferro-alloys industry spends 40 to 70% production cost on power consumption. The power consumption per tonne of ferro-alloys production in the country varies from 3,000 to 12,000 kWh. Ferro Silicon (70-75 grade) consumes upto 8,800 kwh of power per MT and accounts for more than 40% of the total cost of a unit. The unit will receive power from the Department of Power, Arunachal Pradesh at a maximum rate of Rs.3.40 per Kwh, which will be one of the cheapest power in the country. In this connection, the LLP has entered into an agreement with the Department of Power, Government of Arunachal Pradesh for supply of 36 Mw of power to the unit for a period of Twenty Five (25) years from the date of commencement of power supply, which may be extended for further period as per mutual consent.

Experience of Partners in Ferro Alloys & Power Trading: The Group is headed by Shri Niraj Sharma, who was one of the promoters of M/s Platinum Alloys (P) Ltd with the Satyam Group in 2006 in Tippi, Arunachal Pradesh. Mr, N. Sharma had resigned from the Board in FY 17-18, after the partition with the Satyam Group. Also, the Group is into power trading in Arunachal Pradesh Power Corporation Private Limited, a company head quartered in Gurgaon and having a turnover of more than Rs.1,035 Crores in FY 17-18.

4. FIRM'S BACKGROUND

Aether Alloys LLP is a Limited Liability Partnership Firm formed under The Limited Liability Partnership Act, 2008, incorporated on 7th day of December, 2017, vide LLP Identification Number: AAL-3376 by converting the Company, M/s Aether Alloys Private Limited into an LLP. The main object of the LLP is to deal with and manufacture of Ferro Alloys.

1. Name of the Concern	:	AETHER ALLOYS LLP
2. Address	:	
Registered Office	:	Legi Building / Complex, A-Sector, Nahadagun, Papum Pare, Arunachal Pradesh, 791110
Proposed Unit	:	Plot No 11, Industrial Growth Centre, Niglok-Ngorlung, East Siang Dist., Arunachal Pradesh 791 102
3. PAN	:	ABKFA4785D
4. Sector /	:	Manufacturing / Private
Line of Activity	:	Manufacturing of Ferro Alloys.
5. Group	:	
Major Group to which the Firm Belongs	:	Not a recognized group.
6. Constitution	:	Limited Liability Partnership.
7. Date of Incorporation	:	07/12/2017
8. Names of the Promoters	:	Smt. Joshna Sharma Shri Karan Sharma Shri Aditya Mein Smt. Sati Mein Shri Tshering Tashi M/s Aether Tradex (P.) Ltd. (represented by Shri Adaulia Zeliang)
9. CEO	:	Shri Niraj Sharma

Promoters' and Group's Details: Aether Alloys LLP is one of the group of companies of United Brothers established in 1997 in Arunachal Pradesh. The group has vast experience in diverse field viz. minerals, organic farming, manufacturing and trading

of Ferro Alloys and Power Trading. The Group is headed by Shri Niraj Sharma. Mr. Niraj Sharma is a commerce graduate, aged about 55 years (DoB: 28-08-1964). He has over 40 years of experience in business and is actively involved in the businesses of manufacture and dealing in IMFL, power trading, trading in ferro alloys & iron and steel products, in his various concerns, viz: Arunachal Liquors Pvt Ltd, United Brothers Distilleries Pvt Ltd, Arunachal Pradesh Power Corporation Pvt Ltd, Agro India Pvt Ltd, M/s Alcobev Enterprises (Partnership Firm), GF Beer Bonded Warehouse (Partnership Firm), M/s Abotani Beer Warehouse (Partnership Firm) and Siang IMFL Bonded Warehouse (Partnership Firm).

The Individual Partners of the LLP are:

Name of the Partner	Permanent Address	PAN	Passport No.	DIN
Mr. Karan Sharma	611-B, Beverly Park-I, Metro Station, M.G. Road, Sikanderpur Ghosi (68), Gurgaon, Haryana - 122002 Email: karan@appcpl.com Ph: 98733 55292	BEEPS7857C	H7411955	02745926
Mrs. Joshna Sharma	611-B, Beverly Park-I, Metro Station, M.G. Road, Sikanderpur Ghosi (68), Gurgaon, Haryana - 122002 Email: joshnasharma1968@gmail.com Ph: 9810165604	AOLPS7938E	H3823437	01220042
Mr. Aditya Mein	Petrol Pump, Namsai Circle Namsai, Arunachal Pradesh 791103	AWDPM1596N	--	03536328
Mrs. Sati Mein	VIP Lane, Behind Petrol Pump, Namsai, Arunachal Pradesh 792103	AGVPM1399M	--	00586549
Mr. Tshering Tashi	E-92, Famla Road Tawang Public School, Lemburdung, Tawang Arunachal Pradesh- 790104	AEHPT8861P	--	02565554

Brief profile of the promoters are as follows:

Mr. Karan Sharma: Mr. Karan Sharma, aged about 31 years (DoB: 03-01-1988), has done his degree in Banking & Finance from University of London and Diploma in Economics from London School of Economics. He started the Power Trading Company of the Group, M/s Arunachal Pradesh Power Corporation Private Limited in 2009. The Company is head quartered in Gurgaon having a turnover of more than Rs.1,035 Crores in FY 17-18. Apart from M/s Aether Alloys LLP, Mr. Sharma is also associated in the following concerns:

Name of the Concern	Activity
Arunachal Pradesh Power Corporation Private Limited	Power Trading & Solar Power Installations

Mrs. Joshna Sharma: Mrs. Joshna Sharma (B.Com), mother of Mr. Karan Sharma, is aged about 51 years, (DoB: 12-06-1968). She is not actively involved in the business. Apart from M/s Aether Alloys LLP, Mrs Sharma is also associated in the following concerns:

Name of the Concern	Activity
Arunachal Pradesh Power Corporation Private Limited	Power Trading & Solar Power Installations
United Brothers Distilleries Private Limited	Manufacturing & Bottling of IMFL
Aether Tradex Private Limited	Trading in Ferro Alloys
Arunachal Liquors Pvt Ltd	Trading in IMFL
Agro India Private Limited	Business of Agri & Argi-Products

Mr. Aditya Mein: Mr. Aditya Mein is 33 years old and graduated. He is involved actively in the businesses of tea manufacturing & trading of tea and related products. He owns a tea garden and has a tea manufacturing unit and his products enjoy a good local presence. His expertise of running a business would help the firm.

Ms. Sati Mein: Ms. Sati Mein is 60 years old and graduated. She is involved in the field of manufacturing and trading of tea products. She owns a tea plantation and manages a tea manufacturing unit catering to the local northeastern market. Her expertise of running a business would help the firm.

Mr. Tshering Tashi: Mr. Tshering Tashi is 37 years old and graduated. Being a local MLA of Arunachal Pradesh; he has a strong political background with substantial political connections in and around the state. His abilities in the sphere of liasoning are noteworthy.

M/s Aether Tradex (P.) Ltd: M/s Aether Tradex (P.) Ltd. has established in 2010. M/s Aether Tradex (P.) Ltd. has made a name for itself in the list of top suppliers of Minerals & Refractories in India. The supplier company is located in New Delhi, Delhi and is one of the leading sellers of listed products.

The Assets / Liability Statement of the Proposed Guarantors / Partners are given in *Annexure I* and the details of the group concerns are given in *Annexure II*.

5. PROJECT DETAILS

Plant Location: Aether Alloy LLP's manufacturing unit is being implemented at Plot No 11, Industrial Growth Centre, Niglok-Ngorlung, East Siang Dist., Arunachal Pradesh 781 102, on land measuring about 59,000 square meters taken on lease for a period of 50 years from the Government of Arunachal Pradesh.

The area has all necessary infrastructure facilities such as road, rail, telephone and power. Transportation facilities to access various markets are readily available. Both skilled and unskilled labour is available in the area.





The distance of project from key locations are shown in the following table.

Location	Distance (Kms)
Pasighat Airport	35 kms
Dibrugarh City	120 kms
Dibrugarh Railway Station	120 kms

Product: Ferro-alloys are one of the important inputs in the manufacture of alloys and special steel. They are used as deoxidizers and alloy additives in the steel manufacturing process. They impart special properties to steel. The alloys provide increased resistance to corrosion, improve hardness and tensile strength at high temperature, give wear and abrasion resistance and increases creep strength, etc. The principal ferro-alloys are chromium, manganese and silicon. The product series consists mainly of ferro-manganese, silico-manganese, ferrosilicon and ferro-chrome.

6. MANUFACTURING PROCESS & TECHNICAL DETAILS

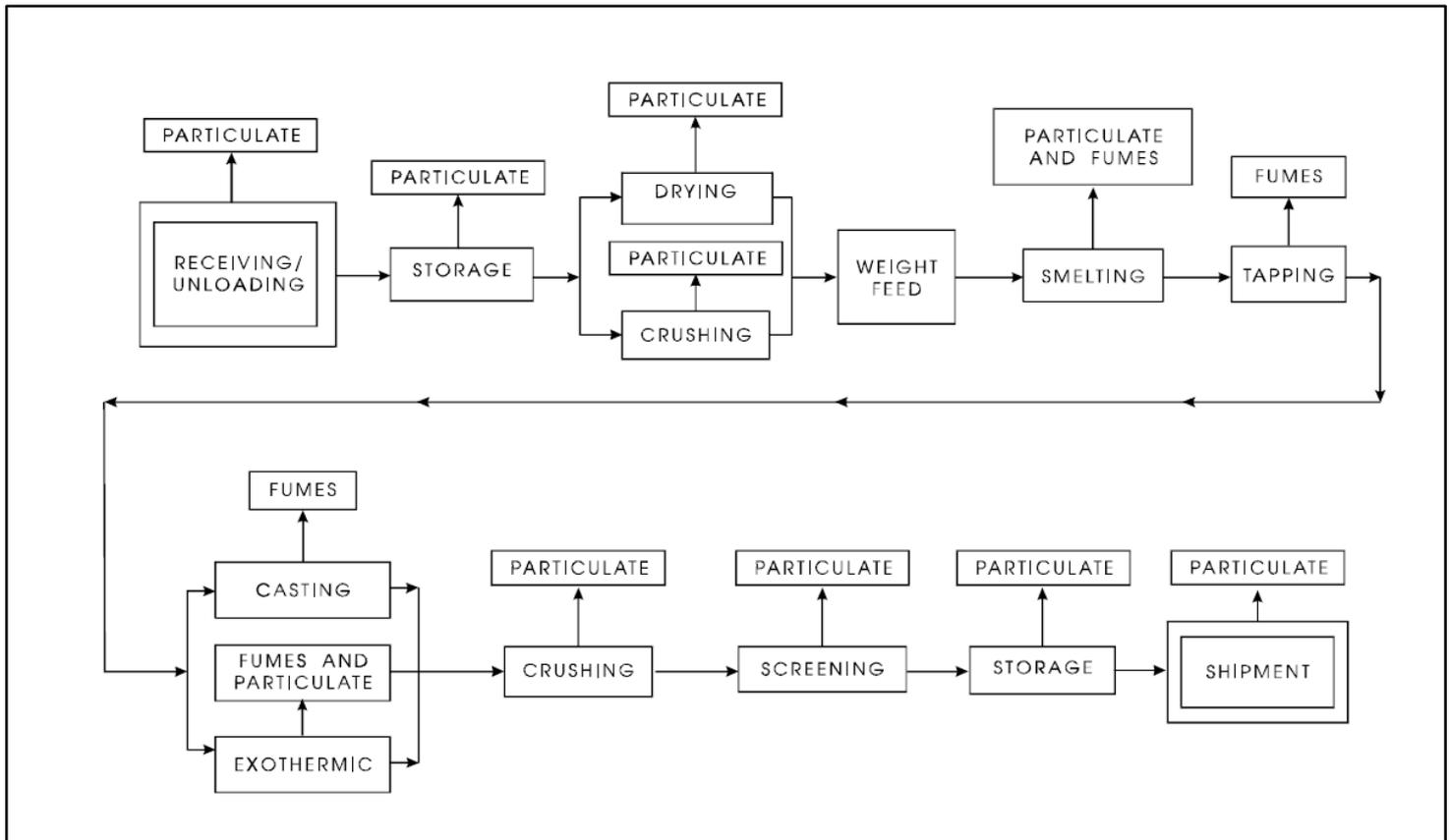
General

Ferroalloy is an alloy of iron with some element other than carbon. Ferroalloy is used to physically introduce or "carry" that element into molten metal, usually during steel manufacture. In practice, the term ferroalloy is used to include any alloys that introduce reactive elements or alloy systems, such as nickel and cobalt-based aluminium systems. Silicon metal is consumed in the aluminium industry as an alloying agent and in the chemical industry as a raw material in silicon-based chemical manufacturing.

The ferroalloy industry is associated with the iron and steel industries, its largest customers. Ferroalloys impart distinctive qualities to steel and cast iron and serve important functions during iron and steel production cycles. The principal ferroalloys are those of chromium, manganese, and silicon. Chromium provides corrosion resistance to stainless steels. Manganese is essential to counteract the harmful effects of sulphur in the production of virtually all steels and cast iron. Silicon is used primarily for deoxidation in steel and as an alloying agent in cast iron. Boron, cobalt, columbium, copper, molybdenum, nickel, phosphorus, titanium, tungsten, vanadium, zirconium, and the rare earths impart specific characteristics and are usually added as ferroalloys.

Process Description

A typical ferroalloy plant is illustrated in Figure below. A variety of furnace types, including submerged electric arc furnaces, exothermic (metallothermic) reaction furnaces, and electrolytic cells can be used to produce ferroalloys. Submerged arc furnace is used for production of silvery iron, ferro-silicon, silicon metal, Silicon/manganese/zirconium (SMZ), high carbon (HC) ferro-manganese, Silico-manganese, HC ferro-chrome.



Typical ferroalloy production process

Submerged Electric Arc Process

In most cases, the submerged electric arc furnace produces the desired product directly. It may produce an intermediate product that is subsequently used in additional processing methods. The submerged arc process is a reduction smelting operation. The reactants consist of metallic ores (ferrous oxides, silicon oxides, manganese oxides, chrome oxides, etc.) and a carbon-source reducing agent, usually in the form of coke, charcoal, high- and low-volatility coal, or wood chips. Limestone may also be added as a flux material. Raw materials are crushed, sized, and, in some cases, dried, and then conveyed to a mix house for weighing and blending. Conveyors, buckets, skip hoists, or cars transport the processed material to hoppers above the furnace. The mix is then gravity-fed through a feed chute either continuously or intermittently, as needed. At high temperatures in the reaction zone, the carbon source

reacts with metal oxides to form carbon monoxide and to reduce the ores to base metal. A typical reaction producing ferrosilicon is shown below:

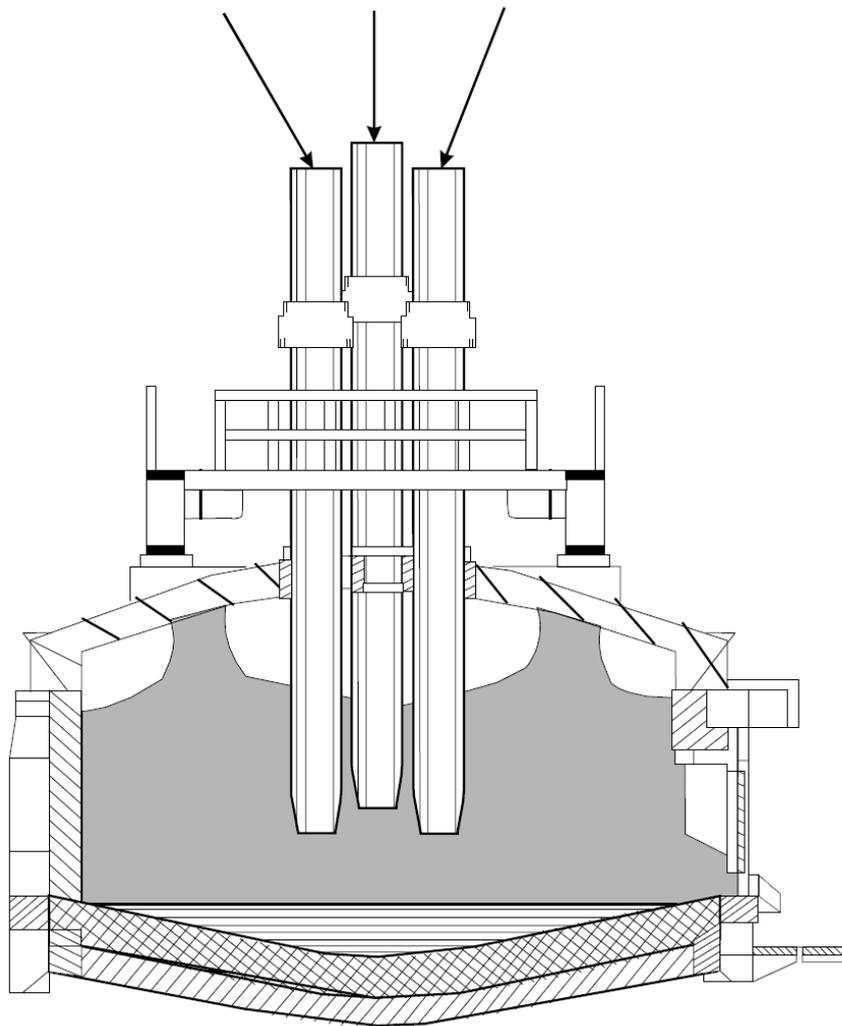


Smelting in an electric arc furnace is accomplished by conversion of electrical energy to heat. An alternating current applied to the electrodes causes current to flow through the charge between the electrode tips. This provides a reaction zone at temperatures up to 2000°C (3632°F). The tip of each electrode changes polarity continuously as the alternating current flows between the tips. To maintain a uniform electric load, electrode depth is continuously varied automatically by mechanical or hydraulic means.

A typical submerged electric arc furnace design is depicted in Figure below. The lower part of the submerged electric arc furnace is composed of a cylindrical steel shell with a flat bottom or hearth. The interior of the shell is lined with 2 or more layers of carbon blocks. The furnace shell may be water-cooled to protect it from the heat of the process. A water-cooled cover and fume collection hood are mounted over the furnace shell. Normally, 3 carbon electrodes arranged in a triangular formation extend through the cover and into the furnace shell opening. Prebaked or self-baking (Soderberg) electrodes ranging from 76 to over 100 cm (30 to over 40 inches) in diameter are typically used. Raw materials are sometimes charged to the furnace through feed chutes from above the furnace. The surface of the furnace charge, which contains both molten material and unconverted charge during operation, is typically maintained near the top of the furnace shell. The lower ends of the electrodes are maintained at about 0.9 to 1.5 meters (3 to 5 feet) below the charge surface. Three phase electric current arcs from electrode to electrode, passing through the charge material. The charge material melts and reacts to form the desired product as the electric energy is

converted into heat. The carbonaceous material in the furnace charge reacts with oxygen in the metal oxides of the charge and reduces them to base metals. The reactions produce large quantities of carbon monoxide (CO) that passes upward through the furnace charge. The molten metal and slag are removed (tapped) through 1 or more tap holes extending through the furnace shell at the hearth level. Feed materials may be charged continuously or intermittently. Power is applied continuously. Tapping can be intermittent or continuous based on production rate of the furnace.

CARBON ELECTRODES



Typical submerged arc furnace design

Submerged electric arc furnaces are of 2 basic types, open and covered. Most of the submerged electric arc furnaces in the country are open furnaces. Open furnaces have a fume collection hood at least 1 meter (3.3 feet) above the top of the furnace shell. Moveable panels or screens are sometimes used to reduce the open area between the furnace and hood, and to improve emissions capture efficiency. Carbon monoxide rising through the furnace charge burns in the area between the charge surface and the capture hood. This substantially increases the volume of gas the containment system must handle. Additionally, the vigorous open combustion process entrains finer material in the charge. Fabric filters are typically used to control emissions from open furnaces.

Covered furnaces may have a water-cooled steel cover that fits closely to the furnace shell. The objective of covered furnaces is to reduce air infiltration into the furnace gases, which reduces combustion of that gas. This reduces the volume of gas requiring collection and treatment. The cover has holes for the charge and electrodes to pass through. Covered furnaces that partially close these hood openings with charge material are referred to as "mix-sealed" or "semi-enclosed furnaces". Although these covered furnaces significantly reduce air infiltration, some combustion still occurs under the furnace cover. Covered furnaces that have mechanical seals around the electrodes and sealing compounds around the outer edges are referred to as "sealed" or "totally closed". These furnaces have little, if any, air infiltration and undercover combustion. Water leaks from the cover into the furnace must be minimized as this leads to excessive gas production and unstable furnace operation. Products prone to highly variable releases of process gases are typically not made in covered furnaces for safety reasons. As the degree of enclosure increases, less gas is produced for capture by the hood system and the concentration of carbon monoxide in the furnace gas increases. Wet scrubbers are used to control emissions from covered furnaces. The scrubbed, high carbon monoxide content gas may be used within the plant or flared.

The molten alloy and slag that accumulate on the furnace hearth are removed at 1 to 5-hour intervals through the tap hole. Tapping typically lasts 10 to 15 minutes. Tap holes are opened with pellet shot from a gun, by drilling, or by oxygen lancing. The molten metal and slag flow from the tap hole into a carbon-lined trough, then into a carbon-lined runner that directs the metal and slag into a reaction ladle, ingot moulds, or chills. (Chills are low, flat iron or steel pans that provide rapid cooling of the molten metal.) After tapping is completed, the furnace is resealed by inserting a carbon paste plug into the tap hole.

Chemistry adjustments may be necessary after furnace smelting to achieve a specified product. Ladle treatment reactions are batch processes and may include metal and alloy additions.

During tapping, and/or in the reaction ladle, slag is skimmed from the surface of the molten metal. It can be disposed of in landfills, sold as road ballast, or used as a raw material in a furnace or reaction ladle to produce a chemically related ferroalloy product.

After cooling and solidifying, the large ferroalloy castings may be broken with drop weights or hammers. The broken ferroalloy pieces are then crushed, screened (sized), and stored in bins until shipment. In some instances, the alloys are stored in lump form in inventories prior to sizing for shipping.

KEY FURNACE EQUIPMENT

The key furnace equipment is being sourced from M/s Ghalsasi.

Electrode Column Equipment: The slipping system is designed to provide reliable and consistent slips with fail safe security through direct mechanical spring clamping of the shoes. The design is modular, reducing the required spares inventory. The slipping system features a dual operation hydraulic cylinder that combines the de-clamping and slipping functions into one cylinder, further reducing spares holding. Careful spring selection compensates for any variations in casing diameter, distortion or misalignment without overstressing the casing and interrupting operation. The integrated electrode guiding system provides guiding at two levels to ensure accurate vertical movement of the electrode column. The Slipping system has been designed to have the lowest possible headroom, allowing reduction of the required height between floors, decreasing building cost.

The design delivers a reliable, robust and maintenance free electrode slipping system, contributing to optimal electrode control.



Model of Ghalsasi's Electrode Column



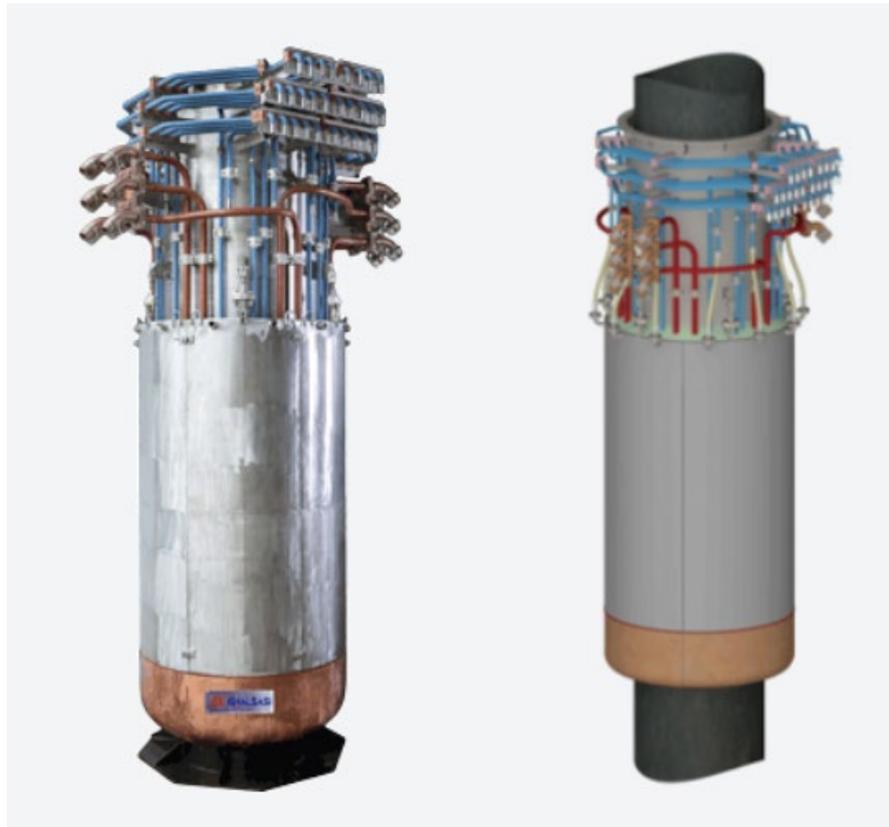
Electrode slipping device

Highlights of Slipping Device

Features	Function	Benefits
Compact design	Reduces the overall height of the furnace building	Saves on cost of civil and structure work
Modular design	All parts of the slipping device are interchangeable	<ul style="list-style-type: none"> → Saves time and cost for operation and maintenance → Minimum spares can be maintained for multiple furnaces of same size
Use of Multiple coil springs	Optimal clamping distribution pressure on the electrode casing	<ul style="list-style-type: none"> → Avoids deformation of electrode casing → Compensates for casing diameter variations or misalignments
Clamping by springs, de-clamping using hydraulic cylinders	<ul style="list-style-type: none"> → Reliable slipping → Fail safe slipping 	Ensures trouble free operation without any requirement of routine maintenance
Fully supports back slipping	Electrodes can be slipped in reverse (upward) direction using the same hydraulic system and without stopping the furnace	<ul style="list-style-type: none"> → Saves operation time → Quick action possible during electrode breakages to save time → Does not require any special or additional arrangement for reverse slipping
Patented design – dual operation hydraulic cylinders	Combines the de-clamping and slipping functions into one cylinder	Only one type of cylinder is required in your inventory

Lower Electrode Column

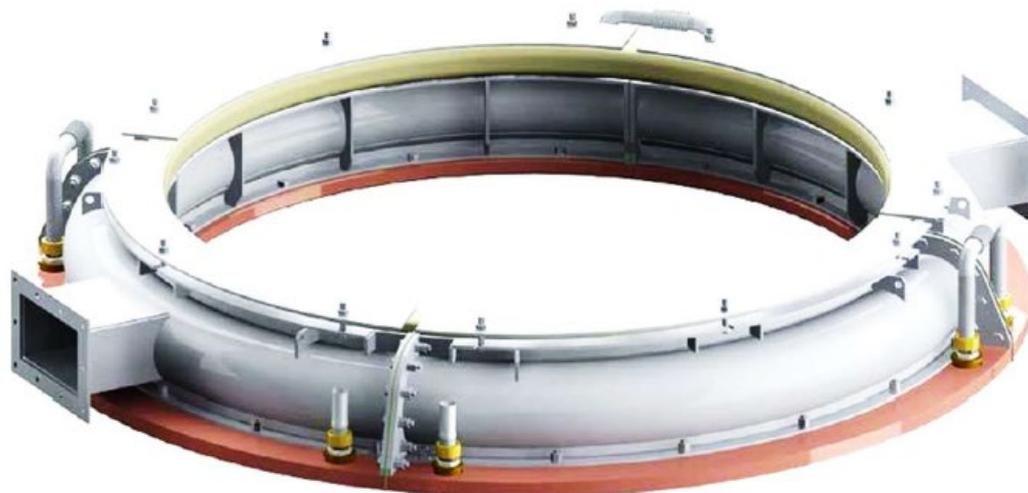
Lower Mantle: Suspension lower mantle will be stainless steel construction. The bottom flange of the SS mantle will be holding contact shoes. The clamps and brackets required for the SS risers and copper bus tube risers, stoppers, pipes banks with insulation etc. will be fitted on the lower suspension mantle. The entire lower mantle with the all the pipes and fittings will be pre-assembled in our workshop for trials and inspection.



Electrode Seal

(a) Equipment Details: Stainless Steel construction water cooled electrode seal will be surrounding the cooling shield to arrest the smoke from the inside the furnace passing through the hood top. Dedicated seal blowers will ensure that hot air from the annular gap between electrode casing and space for electrodes on the roof top is put back in to the furnace shell. In an unlikely event of smoke seepage from the gap, the same will be

arrested by special purpose high temperature withstanding seal rope so that the floor always remains pollution free.

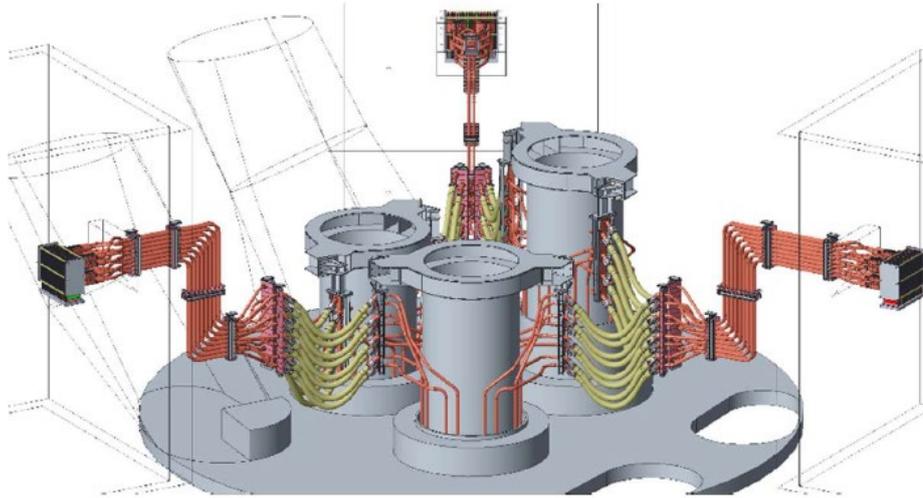


(b) Highlights of Electrode Seal

Features	Functions	Benefits
The base will be SS and water cooled	Efficient heat transfer in the hot zone	Improved seal life and effective sealing
Seal will be floating rather than fixed	Prevent damage to the seal as the electrode moves.	Improved seal life and effective sealing
Radial clamps	Limit the seal movement. Prevent vertical movement if Seal is lifted during electrode regulation	Most effective sealing during furnace operation

Bus Tubes & Bus Tube Hangers: Current is carried to the electrodes through water-cooled copper tubes. Flexible connections are used to connect the bus tubes to the transformer flags and electrode columns. Bus tubes are insulated both individually and in bundles, using epoxy impregnated glass tape. Water-cooled bus tubes drawn from electrolytic copper material will be used to supply the current from the furnace transformer flexible cables to the contact shoe. Bus tubes of suitable size and nos. in parallel per phase will be provided from transformer up to the top of exhaust hood. The bus tubes will be supported on suitable hangers fabricated duly insulated. The bus tube layout will be designed in such way that the formation of 'Delta' (triangle)

will be on the electrode itself. Bus tube from the transformer bushing to the electrode can be pre-fabricated in our works. Only the welding of end connections for the copper tubes can be done on site to save site installation time.



Schematic layout for secondary circuit for furnace

All fixture elements of low-voltage circuit shall be made from non-magnetic steel. Suspensions of bus tubes will be made from nonmagnetic steel and insulation material. The bus tubes are fabricated and assembled in our workshop. The bus tube bundle is engineered for easy shipment. Prefabricated bus tube bundles help to save installation time on site. It also ensures accuracy and control on the quality of fabrication which is critical for this secondary current circuit.



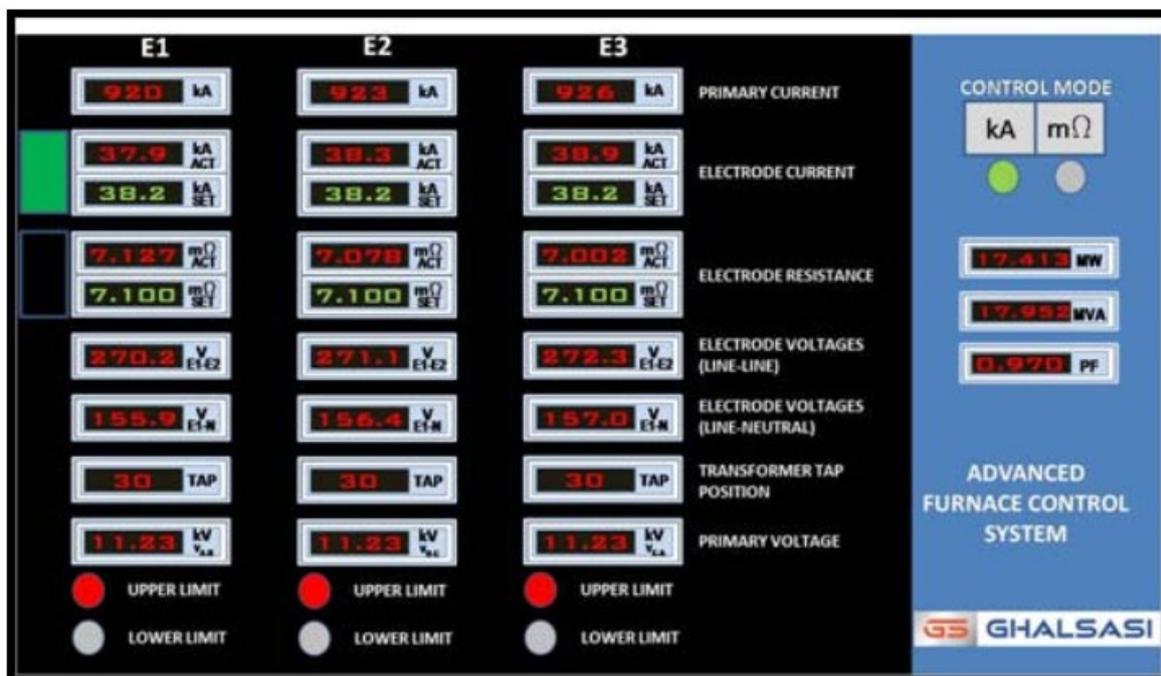
Bus Tubes

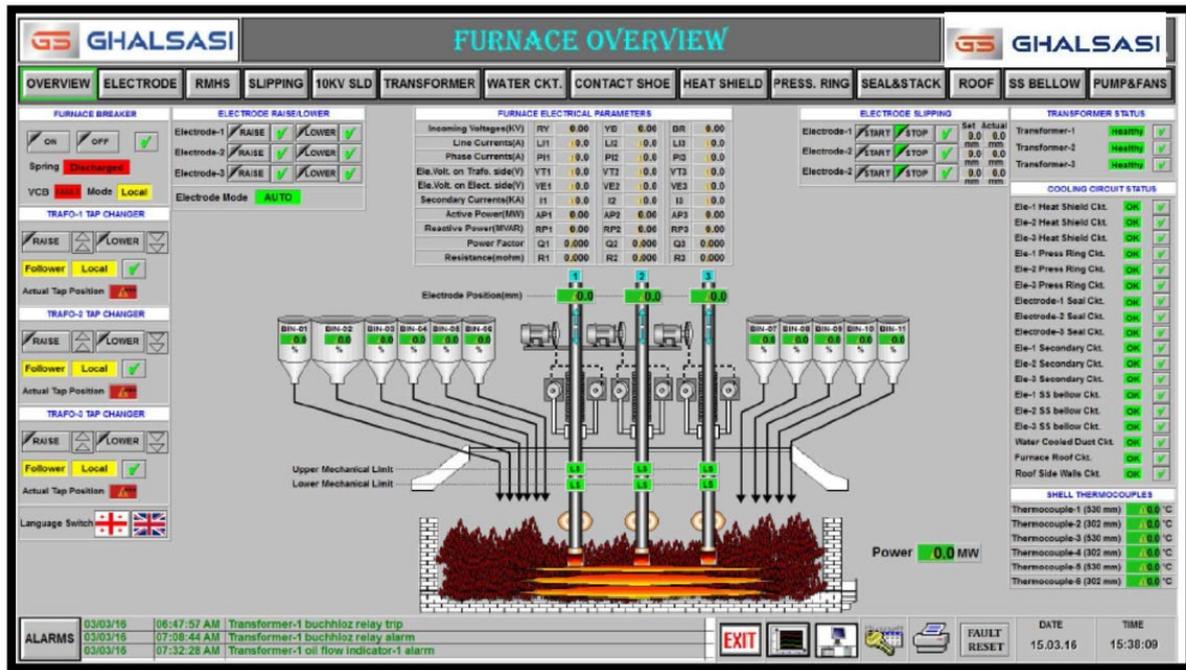
Apart from the main equipment, the furnace instrumentation and automation package is also sourced from Ghalsasi.

Furnace Operation Software

Furnace Controller: In the Automatic Resistance Control mode, the control system regulates the resistance in the secondary circuit. The control system measures secondary voltages, secondary currents, and power.

Stable and balanced control of load, in turn improves furnace performance in terms of power factor and specific energy consumption.





Furnace overview – Supervisory Control and Data Acquisition (SCADA) representation

ANNEXURE R-5/2

**GOVERNMENT OF ARUNACHAL PRADESH
DEPARTMENT OF POWER**

email: cecomita@gmail.com

**Office of the Chief Engineer (Commercial)
cum Chief Electrical Inspector,
Vidyut Bhawan, Itanagar -791111
(Arunachal Pradesh)**

No.CE(COM)/AETHER-ALLOYS/19/2024-25/3847 Dated Itanagar, the 22nd January 2025

TO WHOM IT MAY CONCERN

This is to certify that the entire power being supplied to M/s **Aether Alloys LLP**, situated at Industrial Growth Centre, Niglok, Esat Siang District Arunachal Pradesh – 791102, is sourced from the power availed from state's Hydro Power Generation allocation.

The same may be treated as Green Energy Source.


**Superintending Engineer
Commercial cum CEI
Superintending Engineer (Com)
cum Senior Electrical Inspector
Deptt. of Power,
Itanagar**

ANNEXURE R-5/3

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GAS CLEANING PLANT			

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GAS CLEANING PLANT			

1.0 GENERAL CONDITIONS

This specification document is for Aether Alloys, Niglok Arunachal Pradesh. The Customer is installing a **2 X 9 MVA** submerged arc furnace wherein they want to install pollution control equipment (Gas Cleaning Plant) for the submerged arc furnace. The technical details and other necessary parameters have been detailed below.

2.0 BASIC SPECIFICATIONS AND DESCRIPTION

2.1 GENERAL

The fumes coming from 9 MVA submerged arc furnace will be vented through 2 nos. stacks installed on the furnace. Pneumatic dampers will be installed in the stacks for directing the gases from furnace to pollution control plant.

2.2 DUCTING

2.2.1 A duct connected from a stack of the furnace will carry the fumes to bag filter house by means of one ID fan. The ducts will be suitably stiffened and provided with pneumatic dampers, inspection opening and expansion joints. A separate ducting system shall be designed to extract the fumes generated above the tap hole during metal/slag tapping. These ducts will be in turn connected to the main duct going to the heat exchanger. 3 nos. of tap holes are provided on the furnace shell.

2.2.2 The drawing showing the connection of the GCP duct to the main furnace chimney for the furnace with the respective levels inside the furnace building will be sent you later..

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2.3 DESCRIPTION OF FLUE GASES & HEAT EXCHANGER/GAS COOLER

2.3.1 Average temperature of the flue gases will range from 350°C while the maximum gas temperature (during eruptions, unbalanced reactions etc.) will be around 400°C. These gases are to be cooled to 110 to 120° C using single / two stage air-to-air gas cooler (heat exchanger). Gas cooler will be provided with axial blowers with motors, for cooling of gases, rotary valves, tubes cleaning device (Sonic Horn or suitable), supports & platform etc.

2.3.2 The blowers may be in ON and OFF condition depending upon the temperature of the outgoing gases. Provision will be made for automatic cleaning of dust accumulated inside the tubes. Adequate precautions must be considered during cooling the gases to 110 to 120° C. The temperature should not fall below 110°C in order avoid probable acid condensation.

2.4 CYCLONE

2.4.1 The heat exchanger will be followed by a cyclone separator to catch coarse particles of dust. The bag filter will collect only microsilica.

2.5 BAG FILTER HOUSE

2.5.1 Cooled gases should pass through automatic Pulse- Jet Bag House. This bag house will be fully automatic with off-line cleaning, having suitable number of compartments as per design requirement with superior quality polyester needle felt membrane bags, cages, rotary Valves & poppet Valves, Controller, supports & platform.

2.5.2 A Sequence Controller shall be provided for switch over of compartments by opening / closing poppet valves. Net filtration velocity will be around 1 m/min and should guarantee emission levels of less than 25 mg/nm³.

2.6 CHIMNEY

A freestanding stack should be provided to release the clean gas in to the atmosphere. The height of this stack will be as per the statutory requirement of the pollution control board. There should be provision on the stack for manual stack emission measurements with access ladder and platform. The chimney will be common for both the furnaces.

Note: On line stack monitoring system SO_x, NO_x, CO, CO₂ and O₂ to be provided. (Please quote as optional)

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2.7 CENTRIFUGAL FANS

2.7.1 I.D. fan should be designed for heavy-duty high temperature operation. Fan will be directly driven operating preferably at 750/1000 RPM (synchronous Speed). ID fan shall be of centrifugal type having backward curved impeller suitable for dust-laden gases. The fan shaft will be supported on both ends. The motor should be used along with VVVF drive. Impeller shall be dynamically balanced. Only single ID fan has been envisaged per system.

2.7.2 A separate FD fan should be provided for tapping fume extraction system. The scheme for the tapping fume extraction system will be as per the suppliers' design to guarantee efficient suction for all the flue gases from the furnace floor and tap-hole area. The ambient near the tap hole should not exceed 2 mg/Nm³. The supplier shall engineer the tapping fume extraction duct, hood. The duct routing needs to be finalized with our help

2.8 DUST COLLECTION AND DENSIFIER

Efficient dust handling system shall be provided for dust collected below the bag house. Dust will be pneumatically transported to storage silo. Silo should store approx. 1 day's dust collection. Separate silo will be provided for each system.

The micro silica collection below each bag house will be approximately 4 MT per day having density of 200 kg/m³.

2.8.1 **Densifier:** The dust collected in silo has to be densified for transportation purpose to 600 kg/m³.

2.9 **Bagging and Packing Facility** – Optional.

2.10 **DAMPERS** shall be provided with companion flanges.

2.11 COMPRESSED AIR REQUIREMENT

The compressed air requirement shall be specified by the supplier. The compressed air quality and purity levels requirement shall be specified as ISO 8513 -1: 2010.

2.12 INSTRUMENTATION

The instruments should consist of the following.

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1. Temperature measurements: at inlet and outlet of forced draft cooler and bag filter.
2. Differential pressure transmitter: across bag filter and FDC
3. Sequence controller preferably PLC based for operation of pulse and solenoid valves of bag filter. This PLC should communicate with main PLC / DCS.
4. Vibration monitoring of ID fan.
5. ID fan motor winding temperature.

2.13 SAFETY INTERLOCKS

- Dilution air introduction in the event of bag filter temperature exceeding the set limit.
- Bag Filter by pass arrangement if the bag filter temperature is still not coming under control.

2.14 DOCUMENTATION

- GA drawings of bag filter, FDC, Dust disposal and silo..
- General layout drawing showing the duct routing.
- PID and PFD
- Fabrication drawings of equipments decided to be fabricated at site.
- Specifications of fans, bags, P& S valves, instruments etc.
- Foundation assignment drawings.
- QAP
- Two year spare list.
- O & M manual.

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3.0 DESIGN PARAMETERS

SR. NO.	DESCRIPTION	PARTICULARS
1.	Gas Volume (* refer note)	1,25,000 Nm ³ /hr
2.	Volume of Tapping fumes	50,000 Nm ³ / hr @75 °C - 100 °C
3.	Gas Temperature at the outlet of furnace stack and at the inlet to the Heat Exchanger	350°C (@400°C only during eruptions in the furnace)
4.	Dust Load	2-3 Grams / Nm ³
5.	Particle Size(approx.)	Sub Micron = 40%
		1-5 Micron = 33%
		5 Microns & Above = 27%
6.	Moisture Content	3-4%
7.	Dust Nature	Oxides of the products Under manufacture i.e. Silica & Coke dust
8.	Gas Composition	Since the furnace is semi-open top design, the entire CO generated will burn in the hood itself. Hence, the composition of the Gas will be close to Air.
9.	DP across bag filter	150 mmWC max.

NOTE:

*The SAF side hood has 3 openings of @ 2.5 m X 1.2 m height. However one opening at a time will be opened only during stocking operation of the raw material in the furnace shell and only one door will be opened at given point of time.

The tap holes gases quantity is included in gas volume of 1,25,000 Nm³/hr.

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GS/AE1/TD_03	1	TENDER	November 01, 2018
GAS CLEANING PLANT			

4.0 GUARANTEED PARAMETERS

Following are guaranteed parameters measured at full load of the furnace and at specified volumes as mentioned in the technical specifications.

- a) Emission less than 25 mg/Nm³
- b) Work Zone Emission 2 mg/Nm³.
- b) Pressure drop across the bag house to be less than 150mm WC.

Note:

Two separate Bag house systems to be offered. (The Chimney and micro silica silo will be common for both furnaces)

CUSTOMER	PROJECT	SITE	PAGE
AETHER ALLOYS LLP	2x9 MVA FURNACE	NIGLOK, ARUNACHAL PRADESH	Page 7 of 10

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GAS CLEANING PLANT			

SCOPE MATRIX FOR EACH GAS CLEANING PLANT

Sr. No.	Description	Qty	Design	Mfg.	E&C	Remark
1.	Duct Work & Duct Supports					
	Furnace to Forced Draft Cooler	1 Set	V	C	C	
	Tapping Fume Ducting from Hood to Main Duct	1 Set	V	C	C	
	All duct supports	1 Set	V	C	C	
	Forced Draft Cooler to Bag House / Cyclone	1 Set	V	C	C	
	Cyclone to Bag House	1 Set	V	C	C	
	Cyclone Separator With Support	1 Set	V	C		
	Cyclone Discharge Valves	1 Set	V	V		
	Bag House Inlet / Outlet Manifold	1 Set	V	C	C	
	Bag House to I. D. Fan	1 Set	V	C	C	
	I. D. Fan to Chimney	1 Set	V	C	C	
	Self-Supported Stack + Lighting arrester & Aviation Lamp	1 Set	V	C	C	
2.	Pneumatic Dampers & Expansion Joints					
	Furnace Stack Damper	1 Set	V	V	C	
	Main System Isolation Damper	1 Set	V	V	C	
	Dilution Damper	1 Set	V	V	C	
	Tapping Fume Dampers	1 Set	V	V	C	
	Expansion joints	2 Sets	V	V	C	
3.	FDC					
	Complete Cooler.	1 Set	V	V	C	
			V	V		
4.	Bag House					
	Casing, Plenum, Tube Sheet & Hopper	1 Set	V	V	C	
	Filter Bags, Cages & Ventury	1 Set	V	V	C	
	Pulse Valves, Blow Tubes, Air Header	1 Set	V	V	C	
	Inlet & Outlet Pneumatic Dampers	1 Set	V	V	C	
	Master Controller & Hopper Vibrators	1 Set	V	V	C	
	Rotary Valve + Gear Motor	1 Set	V	V	C	
	Cage Ladder, Platform & Railing	1 Set	V	V	C	
	Pent House for Bag House	1 Set	V	C	C	Optional
	Support Structure	1 set	V	C		
5.	Dust Handling System					
	Centrifugal Blower with Motor	1 Set	V	V	C	
	Conveying Pipeline, Bends, Flanges,	1 Set	V	V	C	

CUSTOMER	PROJECT	SITE	PAGE
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GAS CLEANING PLANT			

Sr. No.	Description	Qty	Design	Mfg.	E&C	Remark
	Bin Vent Filter	1 Set	V	V	C	
	Level Sensor, Air Fluidization & Manual Slide Gate Valve	1 Set	V	V	C	
	Rotary Valve + Gear Motor	1 Set	V	V	C	
	Dust Storage Silo, Supports & Cage Ladder	1 Set	V	C	C	
	Ash Conditioner / Densifier System	1 Set	V	V	C	
6.	I. D. Fan + Electric Motor					
	Fan Assembly, Impeller	2 Sets	V	V	C	
	Base Frame & Mounting Frame	2 Sets	V	V	C	
	Flexible Coupling	2 Sets	V	V	C	
	Shaft with Bearing Block	2 Sets	V	V	C	
	Inlet & outlet Flexible Bellows	2 Sets	V	V	C	
	Inlet Pneumatic Damper	2 Sets	V	V	C	
	Outlet Electro-Mechanical Damper	2 Sets	V	V	C	
	Electric Motor for ID fan (LT)	2 Sets	V	C	C	
7.	Tapping Fume Fan + Electric Motor					
	Fan Assembly, Impeller	1 Set	V	V	C	
	Base Frame & Mounting Frame	1 Set	V	V	C	
	Belt Drive with Pulleys, Shaft with Bearing Block	1 Set	V	V	C	
	Inlet & outlet Flexible Bellows	1 Set	V	V	C	
	Outlet Pneumatic Damper	1 Set	V	V	C	
	Electric Motor for ID fan	1 Set	V	V	C	
8.	Instruments & Controls					
	Instruments as per Annexure 12	1 Set	V	V	C	
	Stack emission monitoring system & Gas Analyser	1 Set	V	C	C	
9.	Painting & Finishing					
	Wire brushing / Cleaning	1 Set	V	V	--	
	2 Coats of Primer + 2 Coats of Finish Paint	1 Set	V	V	--	
10.	Technical Documents	1 Set	--	V	--	
11.	Utilities					
11.1	Electrical					
	MCC Panel, JB, LPBS	1 Set	C	C	C	

CUSTOMER	PROJECT	SITE	PAGE
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DOCUMENT NO.	REVISION	ISSUED FOR	DATE
GS/AE1/TD_03	1	TENDER	November 01, 2018
GAS CLEANING PLANT			

Soft Starter / VFD Panel - ID Fans	1 Set	C	C	C
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Sr. No.	Description	Qty	Design	Mfg.	E&C	Remark
	Power, Communication & Control Cabling & Cable Trays	1 Set	C	C	C	
	Control Room with AC / Ventilation system	1 Set	C	C	C	
	Electric Supply to MCC Panel	1 Set	C	C	C	
	Cable Trench – Civil	1 Set	C	C	C	
11.2	Compressed Air					
	Air Compressor & Receiver	1 Set	C	C	C	
	Air Dryer + Filters	1 Set	C	C	C	
	Compressed Air & instrument air piping, fittings outside battery	1 Lot	C	C	C	
12.	Civil Work					
	Foundation Bolts	1 Set	V	V	C	
	Load Data for Civil Foundations	1 Set	V	--	--	
	Ground equipment earthing	1 Set	C	C	C	
	Civil Foundations	1 Set	C	C	C	
	Unloading & Safe Storage at Site	1 Set	--	--	C	
	Shifting from storage to foundation	1 Set	--	--	C	
	Crane / Hydraulic Lifter / EOT required for Erection	1 Set	--	--	C	
13.	Transport & Forwarding					
	Packing	1 Set		V		
14.	Other					
	First Fill of lubricants, consumable	1 Set	--	V	--	
	Commissioning Spares list	1 Set	--	V	--	
	2 Year Operational list	1 Set	--	V	--	Optional Price
	Commissioning Tools & Tackles	1 Set	--	C	--	
	Insulation & Cladding for Piping	1 Set	C	C	C	
	Supervision for Erection & Commissioning	1 Set		V		Extra as applicable
	Any statutory/Govt. clearance req.	1 Set	--	C	--	

V: VENDOR SCOPE C: CLIENT SCOPE

CUSTOMER	PROJECT	SITE	PAGE
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**PHOTOGRAPHS SHOWCASING THE SITE INFRASTRUCTURE,
SURROUNDING GREEN LANDSCAPE, AND AERIAL VIEWS OF
THE STATE-OF-THE-ART PLANT CAMPUS**



**AERIAL VIEW OF AETHER ALLOYS LLP'S MANUFACTURING
FACILITY AMIDST FORESTED SURROUNDINGS.**



AETHER ALLOYS LLP PLANT VIEW WITH GREEN BELT AND INFRASTRUCTURE LAYOUT.



EXPANDED LAYOUT AND STORAGE FACILITIES OF THE PRODUCTION UNIT.



TOP-DOWN VIEW HIGHLIGHTING THE EFFICIENT LAND UTILIZATION AND FOREST BUFFERS.

140
ANNEXURE R-5/5

SCHEDULE - V
[See rule 7 (1)]
ARUNACHAL PRADESH STATE POLLUTION CONTROL BOARD
GOVERNMENT OF ARUNACHAL PRADESH
NAHARLAGUN



No. APSPCB- 298/2018/AALLP/ 9193-9202

Date 14/12/2018

CONSENT ORDER

Consent to Establish/Operate under Section 25 / 26 of the Water (Prevention and Control of Pollution) Act, 1974, and amendments thereof and operation under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 and amendments thereof, and Authorization/Renewal of Authorization under Rule 5 of the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 (herein after referred to as “the Acts”, “the Rules”)

CONSENT is hereby granted to **M/s Aether Alloys LLP** for establishment/operation of a **Ferro Silicon Unit** (36 MVA, 28750 TPA capacity) located at Industrial Growth Centre, Niglok-Ngorlung, PO/PS: Ruksin, East Siang District, Arunachal Pradesh located in the area declared under the provisions of the Water Act/Air Act and Rules subject to the provisions of the Act and Rules and the orders that may be made further and subject to the following terms and conditions.

1. a) The Consent to operate is granted for a period of two (2) years w.e.f 14.12.2018 to 13.12.2020 after which the applicant shall apply for renewal of consent to operate before three months from the date of expiry.
b) The validity of the authorization granted under Hazardous Wastes (Management & Handling) Rules, 1989, will be valid for a period of two (02) year w.e.f 14.12.2018 to 13.12.2020 after which the industry shall submit a fresh application for renewal of authorization
2. The Consent is valid for the manufacture of the following products/by –products along with quantities only.

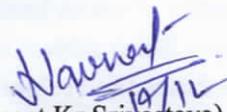
Sl. No.	Products	Maximum Monthly (in Tones)
01.	Ferro Silicon	2129.66
	By Products	
01.	Ferro Silicon Slag	266.17
	Total	2395.83

3. The Industry falls under Red category of the Arunachal Pradesh Water (Prevention & Control of Pollution) Rules 2012 as per schedule- VIII of notification.

4. The Furnace Transformer Capacity of the plant shall be as per the given specifications:

Sl. No	Submerged Electric Arc Furnace	Quantity	Furnace Transformer Capacity
01.	9 MW	2 Nos.	18 MW
02.	18 MW	1 No.	18 MW
Total			36 MW

5. This Order is subject to the provisions of "the Acts" and "the Rules" and Orders made there under and further subject to the terms and conditions incorporated in the Schedule A, B & C enclosed to this order.
6. Notwithstanding anything contained in this consent, the Board (APSPCB) hereby reserves its right and power under Section 27(2) of Water (Prevention and Control of Pollution) Act, 1974 and under Section 21(4) of Air (Prevention and Control of Pollution) Act, 1981 to review any or all the terms & conditions imposed herein and make such alternation as deemed fit and stipulate any additional conditions. The APSPCB may revoke or suspend the order, if implementation of any of the conditions is found not satisfactory.


 (Navneet Kr Srivastava), IFS
 Member Secretary
 MEMBER SECRETARY
 State Pollution Control Board
 Department of Environment & Forests
 Nahaingun, A.P.

SCHEDULE
[See rule (1)]
ARUNACHAL PRADESH POLLUTION CONTROL BOARD
GOVERNMENT OF ARUNACHAL PRADESH
NAHARLAGUN P.S.P.C.B.



No. APSPCB- 298/2018/AALLP/ 4371-76 ate 24/08/2021

CONSENT ORDER

Consent to Establish/Operate under Section 25 / 26 of the Water (Prevention and Control of Pollution) Act, 1974, and amendments thereof and operation under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 and amendments thereof, and Authorization/Renewal of Authorization under Rule 5 of the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 (herein after referred to as "the Acts", "the Rules")

Renewal of Consent is hereby granted to **M/s Aether Alloys LLP** for establishment/operation of a Ferro Silicon Unit (36 MVA, 28750 TPA capacity) located at Industrial Growth Centre, Niglok-Ngorlung, PO/PS: Ruksin, East Siang District, Arunachal Pradesh located in the area declared under the provisions of the Water Act/Air Act and Rules subject to the provisions of the Act and Rules and the orders that may be made further and subject to the following terms and conditions.

1. The Consent to establish/operate is granted for a period of three (3) years w.e.f 14.12.2020 to 13.12.2023, after which the applicant shall apply for renewal of consent to operate before three months from the date of expiry.
2. The Consent is valid for the manufacture of the following products/by – products with the capital investment (land, building, Plant & Machinery) of R.14877.00 Lakhs.

Sl. No.	Products	Maximum Monthly (in Tones)
01.	Ferro Silicon	2129.66
	By Products	
01.	Ferro Silicon Slag	266.17
	Total	2395.83

Signature

MEMBER SECRETARY
State Pollution Control Board
Department of Environment & Forest
Naharlagun, A.P.

3. The Industry falls under Orange category of the Arunachal Pradesh Water (Prevention & Control of Pollution) amendment Rules 2020 as per schedule- VIII of notification.
4. The Furnace Transformer Capacity of the plant shall be as per the given specifications:

Sl. No	Submerged Electric Arc Furnace	Quantity	Furnace Transformer Capacity
01.	9 MVA (Mega Voltage Ampere)	2 Nos.	18 MVA
02.	18 MVA (Mega Voltage Ampere)	1 No.	18 MVA
Total			36 MVA

5. This Order is subject to the provisions of "the Acts" and "the Rules" and Orders made there under and further subject to the terms and conditions incorporated in the Schedule A & B enclosed to this order.
6. Notwithstanding anything contained in this consent, the Board (APSPCB) hereby reserves its right and power under Section 27(2) of Water (Prevention and Control of Pollution) Act, 1974 and under Section 21(4) of Air (Prevention and Control of Pollution) Act, 1981 to review any or all the terms & conditions imposed herein and make such alternation as deemed fit and stipulate any additional conditions. The APSPCB may revoke or suspend the order, if implementation of any of the conditions is found not satisfactory.


 (T. Gapak), IFS
 Member Secretary
 MEMBER SECRETARY
 State Pollution Control Board
 Department of Environment & Forest
 Naxos, A.P.

SCHEDULE-A

1. The industry shall immediately submit the revised application for consent to this Board in the event of any change in the raw material used, process employed, quantity of trade effluents & quantity of emissions etc.
2. a) All the fugitive emissions shall be controlled with proper measures.
b) The applicant shall also install the equipment such as wind speed recorder and wind direction recorder.
3. A good housekeeping shall be maintained both within the factory and in the premises. All hoods, pipes, valves, sewers and drains shall be leak proof. Floor washings shall be admitted into the effluent collection system only and shall not be allowed to find their way into storm drains or open areas.
4. The applicant shall comply with the directives/orders issued by the Board in this consent order and at all subsequent times without any negligence on his part. The applicant shall be liable for such legal action against him as per the provision of Law/act in case of non-compliance of any order/directive issued at any time and /or violation of the terms and conditions of this consent order.
5. The applicant shall furnish to the visiting officer and/or the order any information regarding the construction, installation or operation of the effluent treatment system /air pollution control equipment and such other particulars as may be pertinent for preventing and controlling pollution.
6. At any time during the inspection of Pollution Control Board Officers or any licensing /servicing authorities/if it is observed that the industry is not complying with any of the above conditions leading to pollution problems, this consent is liable for cancellation without further notice and all the services rendered by the servicing departments shall be withdrawn without further notice.
7. The applicant shall exhibit the consent order of the board in the factory premises at prominent place for the information of the inspecting officers of the different departments.



MEMBER SECRETARY
State Pollution Control Board
Department of Environment & Forest
Nagpur, A.P.

SCHEDULE-B

1. The industry shall take steps to reduce water consumption to the extent possible and consumption shall not exceed the quantities mentioned below:

S. No	Water Consumption	Quantity (in LKD)
1.	Cooling/DM Plant/RO Plant	20 KLD
2.	Domestic	50 KLD
Total		70 KLD

2. A sampling port with removable dummy of not less than 15 cm diameter shall be provided in the stack at a distance of 8 times the diameter of the stack ladder shall be provided below 1 meter of the sampling port to accommodate three persons with instruments. A 15 AMP 250 V plug point shall be provided on the platform.
3. The industry shall comply with ambient air quality standards of PM₁₀ (particulate matter size less than 10 μm)-100 $\mu\text{m}/\text{m}^3$, PM_{2.5} (Particulate Matter less than 2.5 μm)-60 $\mu\text{m}/\text{m}^3$, SO₂-80 $\mu\text{m}/\text{m}^3$, NO₂-80 $\mu\text{m}/\text{m}^3$ Outside the factory premises at the periphery of the industry.
4. The industry shall not increase the capacity beyond the permitted capacity mentioned in this consent order without obtaining CTE/CTO of the Board.
5. The industry shall regularly operate dust extraction system with hood and shall pass the emissions through air pollution control equipment i.e. pulse jet bag filter to control the emissions.
6. The industry shall control fugitive emissions during handling of raw materials. There should be a proper mechanism to check fugitive emission from spillage of raw materials handling.
7. Green Belt shall be developed over 33% of the plant area. Green belt shall be done by planting native and broad leaved species in consultation with local DFO. Tall tree shall be planted all along the boundary while relatively short, bushy ornamental trees should be planted in the inner circle. Between these two, locally adapted multipurpose trees shall be grown so that an alley like structure is formed.
8. The industry shall not discharge any waste water outside the plant premises.

9. There should be regular water spraying and cleaning on the internal roads that has been blacktopped using rotating sprinkler system.
10. The industry shall ensure the control of secondary fugitive emissions from the electric arc furnace/induction arc furnace during charging of scrap and tapping by provision of canopy hood over the furnaces and undertaking engineering modifications. Fugitive emission from continuous casting of molten metal into various products shall be controlled by instillation fume extraction system. Further, specific measures like provisions of dedusting system, bag filters, water-spraying system to suppress the dust at transfer point shall be taken.
11. At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of SPM, SO₂ and NO₂ are anticipated in consultation with State Pollution Control Board/Central Pollution Control Board.
12. Data on ambient air quality and stack monitoring should be submitted to State Pollution Control Board on regular basis.
13. The overall noise level in and around the plant area should be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc on all sources of noise generation.
14. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per Factories Act.
15. Notwithstanding anything contained in this consent, the Board (APSPCB) hereby reserves its right and power under Section 27(2) of Water (Prevention and Control of Pollution) Act, 1974 and under Section 21(4) of Air (Prevention and Control of Pollution) Act, 1981 to review any or all the conditions imposed herein and make such alternation as deemed fit and stipulate any additional conditions by the Board. The APSPCB may revoke or suspend the order, if implementation of any of the above conditions is not satisfactory.



MEMBER SECRETARY
State Pollution Control Board
Department of Environment & Forest
Madhavgun, A.P.

No. APSPCB- 298/2018/AALLP/ 4371-76 Date 24/08/2021

To,

✓ Shri Karan Sharma (Partner)
M/s Aether Alloys LLP
H.No-604-B Sarhol
Barverly Park Vill. Sarhaul, Teh, Gurgaon

Copy to:

1. The Director Industries, Itanagar, Govt. of Arunachal Pradesh for kind information.
2. The Deputy Commissioner, Pasighat, East Siang District, Govt. of Arunachal Pradesh for kind information.
3. The Deputy Director of Industries, DIC Pasighat, East Siang District, Govt. of Arunachal Pradesh for kind information.
4. The Project Manager, Industrial Growth Centre, Niglok-Ngorlung, East Siang District, Govt. of Arunachal Pradesh for kind information.
5. Office copy.


(T.Gapak,) IFS
Member Secretary
MEMBER SECRETARY
State Pollution Control Board
Department of Environment & Forest
Nagpur, A.P.



SCHEDULE – V
[See rule 7 (1)]
ARUNACHAL PRADESH STATE POLLUTION CONTROL BOARD
GOVERNMENT OF ARUNACHAL PRADESH
NAHARLAGUN

No. APSPCB- 298/2018/AALLP/ 262-65

ate 22 /02 /2024

CONSENT ORDER

Consent to Establish/Operate under Section 25 / 26 of the Water (Prevention and Control of Pollution) Act, 1974, and amendments thereof and operation under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 and amendments thereof, and Authorization/Renewal of Authorization under Rule 5 of the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008. (herein after referred to as “the Acts”, “the Rules”)

Renewal of Consent is hereby granted to **M/s Aether Alloys LLP** for operation of a Ferro Silicon Unit (30,000 TPA capacity) at Industrial Growth Centre, Niglok, PO/PS: Ruksin, East Siang District, Arunachal Pradesh located in the area declared under the provisions of the Water Act/Air Act and Rules subject to the provisions of the Act and Rules and the orders that may be made further and subject to the following terms and conditions.

1. The Consent to operate is granted for a period of 3 (Three) years w.e.f 14.12.2023 to 13.12.2026, after which the applicant shall apply for renewal of consent to operate before three months from the date of expiry.
2. The Consent is valid for the manufacture of the following products/by – products with the capital investment of (land. Building & machinery) of Rs.14877.00 Lakhs.

Sl.No.	Product	Maximum Monthly (in Tones)
1.	Ferro Silicon	2129.66
	By Products	
1.	Ferro Silicon Slag	266.17
	Total	2395.83

3. The Industry falls under Orange category of the Arunachal Pradesh Water (Prevention & Control of Pollution) (Amendment) Rules 2020 as per schedule- VIII of notification.


 Member Secretary
 State Pollution Control Board
 Govt. of Arunachal Pradesh
 Naharlagun

4. Furnace Transformer Capacity of the plant shall be as per the given specifications:

Sl. No	Submerged Electric Arc Furnace	Quantity	Furnace Transformer Capacity
1.	9 MVA (mega Voltage Ampere)	2 Nos.	18 MVA
2.	18 MVA (mega Voltage Ampere)	1 No.	18 MVA
Total			36 MVA

5. This order is subject to the provisions of "the Acts" and "The Rules" and orders made the under and further subject to the terms and conditions incorporated in the Schedule A & B enclosed to this order.

6. Self Monitoring Schedule:

Applicant shall get the samples of treated effluents/ emissions hazardous wastes/ leachates analyzed from the laboratory recognized by the SPCB/PCC/CPCB/ MoEF& CC, New Delhi and confirm to the limits stipulated. Test report shall be sent to the State Pollution Control Board. Analysis frequency could be different for various sources as may be specified by the Board.

7. Notwithstanding anything contained in this consent, the Board (APSPCB) hereby reserves its right and power under Section 27(2) of Water (Prevention and Control of Pollution) Act, 1974 and under Section 21(4) of Air (Prevention and Control of Pollution) Act, 1981 to review any or all the conditions imposed herein and make such alternation as deemed fit and stipulate any additional conditions by the Board. The APSPCB may revoke or suspend the order, if implementation of any of the above conditions is not satisfactory.


 (Koj Rinya IFS)
 Member Secretary
 State Pollution Control Board
 Govt. of Arunachal Pradesh
 Naharlagun

SCHEDULE-A

1. The industry shall immediately submit the revised application for consent to this Board in the event of any change in the raw material used, process employed, quantity of trade effluents & quantity of emissions etc.
2. a) All the fugitive emissions shall be controlled with proper measures.
b) The applicant shall also install the equipment such as wind speed recorder and wind direction recorder.
3. A good housekeeping shall be maintained both within the factory and in the premises. All hoods, pipes, valves, sewers and drains shall be leak proof. Floor washings shall be admitted into the effluent collection system only and shall not be allowed to find their way into storm drains or open areas.
4. The applicant shall submit Environment Statement in Form-V before 30th September every year as per Rule No.14 of E(P) Rules, 1986 & its amendments thereof.
5. The applicant shall comply with the directives/orders issued by the Board in this consent order and at all subsequent times without any negligence on his part. The applicant shall be liable for such legal action against him as per the provision of Law/act in case of non-compliance of any order/directive issued at any time and /or violation of the terms and conditions of this consent order.
6. The applicant shall furnish to the visiting officer and/or the order any information regarding the construction, installation or operation of the effluent treatment system /air pollution control equipment and such other particulars as may be pertinent for preventing and controlling pollution.
7. All the rules & regulations notified by the Ministry of Environment, Forests & Climate Change, Government of India in respect of management, handling, transportation and storage of hazardous chemicals and wastes shall be followed.
8. All the rules & regulation notified by the Ministry of Law and Justice, Government of India regarding Public Liability Insurance Act, 1991 shall be followed.
9. The applicant shall at his own cost get the effluent samples collected both before and after treatment/samples of emissions collected and analyzed from any Laboratory which is established as per the guidelines and norms of MoEF &CC, GOI and CPCB, New Delhi every three months for the parameters indicated in the condition No.1 and Condition No.4 of Schedule-B and shall submit in duplicate the report thereof to the Board.


Member Secretary
State Pollution Control Board
Govt. of Arunachal Pradesh
Naharlagun

10. The applicant shall provide appropriate Rain Water Harvesting Systems on the available upstream portion of the plant site.
11. At any time during the inspection of Pollution Control Board Officers or any licensing /servicing authorities/if it is observed that the industry is not complying with any of the above conditions leading to pollution problems, this consent is liable for cancellation without further notice and all the services rendered by the servicing departments shall be withdrawn without further notice.
12. The applicant shall exhibit the consent order of the board in the factory premises at prominent place for the information of the inspecting officers of the different departments.

SCHEDULE-B

1. The industry shall take steps to reduce water consumption to the extent possible and consumption shall not exceed the quantities mentioned below:

S. No	Water Consumption	Quantity (in LKD)
1.	Cooling/DM Plant/RO Plant	20 KLD
2.	Domestic	50 KLD
Total		70 KLD

2. A sampling port with removable dummy of not less than 15 cm diameter shall be provided in the stack at a distance of 8 times the diameter of the stack ladder shall be provided 1 meter of the sampling port to accommodate three persons with instruments. A 15 AMP 250 V plug point shall be provided on the platform.
3. The industry shall comply with ambient air quality standards of PM 10 and PM 2.5 outside the factory premises at the periphery of the industry.
4. The industry shall not increase the capacity beyond the permitted capacity mentioned in this consent order without obtaining CTE/CTO of the Board.
5. The industry shall regularly operate dust extraction system with hood and shall pass the emission through air pollution control equipment i.e pulse jet filter to the control the emission.
6. The industry shall control fugitive emissions during handling of raw materials. There should be proper mechanism to check fugitive emission from spillage of raw materials.
7. Green belt shall be developed over 33% of the plant area.

No.APSPCBC0298/2018/AALLP/ 262-65

Date 22 /02/2024

To,

✓ Shri Karan Sharma(partner)
M/s Aether Alloys LLP
H.No-604-B Sarhol
Barverly park Vill. Sarhaul, Gurgoan

Copy to:

1. The Director of Industries, Govt. of A.P, Itanagar for kind information.
2. The Deputy Commissioner, Pasighat, Govt. of A.P for kind information.
3. The Project Manager, Industrial growth Center, Niglok-Ngorlung, PO/PS
Ruksin, East Siang District for information
4. Office copy

(Koj Rinya IFS)
Member Secretary
Member Secretary
APSPCB
Naharlagun

NO OBJECTION CERTIFICATE OF NGORLUNG GAON PANCHAYAT

Date: 4/5/2018.....

This is to certify that Aether Alloys LLP is establishing Ferro Alloys & Ferro Silicon industry within the allotted land Plot No. 11 of Industrial Growth Centre at Niglok. We have no objection to set up their industry in the aforesaid land.

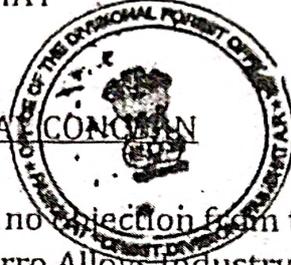
Wish our all success to M/s Aether Alloys LLP.

1-5-2018
O TADDA
Head Gaon Burah/Gaon Burah
Ngorlung Village H.G.B. Ngorlung
East Siang Dist. (A.P.)

ANNEXURE R-5/9

GOVERNMENT OF ARUNACHAL PRADESH
OFFICE OF THE DIVISIONAL FOREST OFFICER
PASIGHAT FOREST DIVISION
PASIGHAT

TO WHOM IT MAY CONCERN

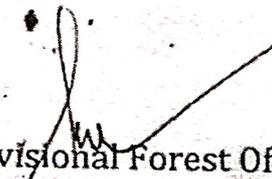


This is to certify that there is no objection from the undersigned for the Establishment of Ferro Silicon/Ferro Alloys Industry at IGC Niglok, under Ruksin Circle, East Siang Dist.

Certified that this NOC is being issued to M/s Aether Alloys LLP after scrutiny of necessary documents submitted to this office.

Memo No.PFD/8-7/MISC/2013/Pt-I/

Dated:


Divisional Forest Officer
Pasighat Forest Division

~~Divisional Forest Officer
Pasighat Forest Division
Pasighat~~

ANNEXURE R-5/10

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GOVERNMENT OF ARUNACHAL PRADESH
DEPARTMENT OF INDUSTRIES
ITANAGAR

No. DOI/13024/2/2021-O/o DIR-IND-Directorate of Industries-(Part-I) /104 Dated Ita the 5th Dec'2021

To ,

M/s Aether Alloys, LLP
A-Sector Legi Complex,
Naharlagun, Itanagar,
Arunachal Pradesh

Sub. :- No- Objection Certificate

Ref :- Your Letter No. AA_LLPIO/36/2021-22 dated 10/12/2021

Sir,

Attached please find herewith NO-Objection Certificate in respect of M/s Aether Alloys, LLP vide your letter referred above .

Kindly acknowledge the receipt of the same.

Yours faithfully,

Encl: No-Objection Certificate

(Goli Angu),

Deputy Director of Industries
Government of Arunachal Pradesh,
Itanagar

e-file No.DOI/13024/2/2021-O/o DIR-IND-DIRECTORATE OF INDUSTRIES (Part-I)

GOVERNMENT OF ARUNACHAL PRADESH
DEPARTMENT OF INDUSTRIES
ITANAGAR



Dated Itanagar the 31st Dec'2021

TO WHOM IT MAY CONCERN

This is to certify that the Department of Industries (First Party) has no objection in the event of Land Lease Hold right of a part of Plot measuring 59000 sq. mtr. vide allotment Order No. IND/GC/25/2014 Dated 05/03/2015 and IND/IGC/NN/35/2014-15/2203-07 Dated 27/09/2018 at Industrial Growth Centre, Niglok-Ngorlung, East Siang District, Arunachal Pradesh is Mortgaged to any Bank / Financial Institutions by the M/s Aether Alloys, LLP, Arunachal Pradesh for Financial assistance / loan as per the term and condition laid in the Govt Notification vide No. IND/GC/100/07/3498 dated 1/10/2010 for Industrial Growth Centre, Niglok-Ngorlung, East Siang District, Arunachal Pradesh.

There is no outstanding lease rent dues against the said plot as on date of issue of this certificate.

This issues with prior approval of the competent authority.

Signed by Taru Talo

Date: 05-01-2022 12:49:32

(Taru Talo)
Reason: Approved
Director of Industries,

Govt. of Arunachal Pradesh,
Itanagar



सत्यमेव जयते

भारत सरकार
जल शक्ति मंत्रालय
जल संसाधन, नदी विकास
और गंगा संरक्षण विभाग
केन्द्रीय भूमि जल प्राधिकरण
Government of India
Ministry of Jal Shakti
Department of Water Resources,
River Development & Ganga Rejuvenation
Central Ground Water Authority

(भूजल निकासी हेतु अनापत्ति प्रमाण पत्र)
NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION

Project Name:	Aether Alloys Llp											
Project Address:	Plot No-11, industrial Growth Centre, Niglok Ngorlung											
Village:	Niglok	Block:	Ruksin									
District:	East Siang	State:	Arunachal Pradesh									
Pin Code:												
Communication Address:	Plot No-11, industrial Growth Centre, Niglok Ngorlung, Ruksin, East Siang, Arunachal Pradesh - 791102											
Address of CGWB Regional Office :	Central Ground Water Board North Eastern Region, Betkuchi, Opposite Isbt., Nh-37, Guwahati,, Kamrup Metro, Assam - 781035											
1. NOC No.:	CGWA/NOC/IND/ORIG/2024/20279	2. Date of Issuance	5/9/2024 5:29:57 PM									
3. Application No.:	21-4/120/AR/IND/2024	4. Category: (GWRE 2023)	Safe									
5. Project Status:	New Project	6. NOC Type:	New									
7. Valid from:	09/05/2024	8. Valid up to:	08/05/2027									
9. Ground Water Abstraction Permitted:												
	Fresh Water	Saline Water	Dewatering	Total								
	m ³ /day	m ³ /year	m ³ /day	m ³ /year	m ³ /day	m ³ /year						
	20.00	6000.00										
10. Details of ground water abstraction /Dewatering structures												
	Total Existing No.:2						Total Proposed No.:0					
	DW	DCB	BW	TW	MP	MPu	DW	DCB	BW	TW	MP	MPu
Abstraction Structure*	0	0	2	0	0	0	0	0	0	0	0	0
*DW- Dug Well; DCB-Dug-cum-Bore Well; BW-Bore Well; TW-Tube Well; MP-Mine Pit;MPu-Mine Pumps												
11. Ground Water Abstraction/Restoration Charges paid (Rs.):										18000.00		
12. Environment Compensation (if applicable) paid (Rs.):										24000.00		
13. Number of Piezometers(Observation wells) to be constructed/ monitored & Monitoring mechanism.				No. of Piezometers			Monitoring Mechanism					
							Manual	DWLR**	DWLR With Telemetry			
**DWLR - Digital Water Level Recorder				1			1	0	0			

(Compliance Conditions given overleaf)

This is an auto generated document & need not to be signed.

Validity of this NOC shall be subject to compliance of the following conditions:

Mandatory conditions:

- 1) Installation of tamper proof digital water flow meter with telemetry on all the abstraction structure(s) shall be mandatory for all users seeking No Objection Certificate and intimation regarding their installation shall be communicated to the CGWA within 30 days of grant of No Objection Certificate.
- 2) Proponents shall mandatorily get water flow meter calibrated from an authorized agency once in a year.
- 3) Construction of purpose-built observation wells (piezometers) for ground water level monitoring shall be mandatory as per Section 14 of Guidelines. Water level data shall be made available to CGWA through web portal. Detailed guidelines for construction of piezometers are given in Annexure-II of the guidelines.
- 4) Proponents shall monitor quality of ground water from the abstraction structure(s) once in a year. Water samples from bore wells/ tube wells / dug wells shall be collected during April/May every year and analysed in NABL accredited laboratories for basic parameters (cations and anions), heavy metals, pesticides/ organic compounds etc. Water quality data shall be made available to CGWA through the web portal.
- 5) In case of mining projects, additional key wells shall be established in consultation with the Regional Director, CGWB for ground water level monitoring four (4) times a year (January, May, August and November) in core as well as buffer zones of the mine.
- 6) In case of mining project the firm shall submit water quality report of mine discharge/ seepage from Govt. approved/ NABL accredited lab.
- 7) The firm shall report compliance of the NOC conditions online in the website (www.cgwa-noc.gov.in) within one year from the date of issue of this NOC.
- 8) Industries abstracting ground water in excess of 100 m³/d shall undertake annual water audit through certified auditors and submit audit reports within three months of completion of the same to CGWA. All such industries shall be required to reduce their ground water use by at least 20% over the next three years through appropriate means.
- 9) Application for renewal can be submitted online from 90 days before the expiry of NOC. Ground water withdrawal, if any, after expiry of NOC shall be illegal & liable for legal action as per provisions of Environment (Protection) Act, 1986.
- 10) This NOC is subject to prevailing Central/State Government rules/laws/norms or Court orders related to construction of tube well/ground water abstraction structure / recharge or conservation structure/discharge of effluents or any such matter as applicable.

General conditions:

- 11) No additional ground water abstraction and/or de-watering structures shall be constructed for this purpose without prior approval of the Central Ground Water Authority (CGWA).
- 12) The proponent shall seek prior permission from CGWA for any increase in quantum of groundwater abstraction (more than that permitted in NOC for specific period).
- 13) Proponents shall install roof top rain water harvesting in the premise as per the existing building bye laws in the premise.
- 14) The project proponent shall take all necessary measures to prevent contamination of ground water in the premises failing which the firm shall be responsible for any consequences arising thereupon.
- 15) In case of industries that are likely to contaminate the ground water, no recharge measures shall be taken up by the firm inside the plant premises. The runoff generated from the rooftop shall be stored and put to beneficial use by the firm.
- 16) Wherever feasible, requirement of water for greenbelt (horticulture) shall be met from recycled / treated waste water.
- 17) Wherever the NOC is for abstraction of saline water and the existing wells (s) is /are yielding fresh water, the same shall be sealed and new tubewell(s) tapping saline water zone shall be constructed within 3 months of the issuance of NOC. The firm shall also ensure safe disposal of saline residue, if any.
- 18) Unexpected variations in inflow of ground water into the mine pit, if any, shall be reported to the concerned Regional Director, Central Ground Water Board.
- 19) In case of violation of any NOC conditions, the applicant shall be liable to pay the penalties as per Section 16 of Guidelines.
- 20) This NOC does not absolve the proponents of their obligation / requirement to obtain other statutory and administrative clearances from appropriate authorities.
- 21) The issue of this NOC does not imply that other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would consider the project on merits and take decisions independently of the NOC.
- 22) In case of change of ownership, new owner of the industry will have to apply for incorporation of necessary changes in the No Objection Certificate with documentary proof within 60 days of taking over possession of the premises.
- 23) This NOC is being issued without any prejudice to the directions of the Hon'ble NGT/court orders in cases related to ground water or any other related matters.
- 24) Proponents, who have installed/constructed artificial recharge structures in compliance of the NOC granted to them previously and have availed rebate of upto 50% (fifty percent) in the ground water abstraction charges/ground water restoration charges, shall continue to regularly maintain artificial recharge structures.
- 25) Industries which are likely to cause ground water pollution e.g. Tanning, Slaughter Houses, Dye, Chemical/ Petrochemical, Coal washeries, pharmaceutical, other hazardous units etc. (as per CPCB list) need to undertake necessary well head protection measures to ensure prevention of ground water pollution as per Annexure III of the guidelines.
- 26) In case of new infrastructure projects having ground water abstraction of more than 20 m³/day, the firm/entity shall ensure implementation of dual water supply system in the projects.
- 27) In case of infrastructure projects, paved/parking area must be covered with interlocking/perforated tiles or other suitable measures to ensure groundwater infiltration/harvesting.
- 28) In case of coal and other base metal mining projects, the project proponent shall use the advance dewatering technology (by construction of series of dewatering abstraction structures) to avoid contamination of surface water.
- 29) The NOC issued is conditional subject to the conditions mentioned in the Public notice dated 27.01.2021 failing which penalty/EC/cancellation of NOC shall be imposed as the case may be.
- 30) This NOC is issued subject to the clearance of Expert Appraisal Committee (EAC) (if applicable).
- 31) In the self-compliance report, the PP shall submit details of Drilling Agency/ Agencies, which has/ have constructed BW(s)/ TW(s) along with undertaking to the effect that all necessary measures have been taken as per directions of Hon'ble Supreme Court provided in Annexure-VII of guidelines dated 24.09.2020 in respect of abandoned/ failed BW(s)/ TW(s)/Piezometer(s), if any. The PP is advised to engage registered drilling agency/ agencies. In the event of any mishap/ unfortunate incident due to negligence in taking measures for prevention of accident due to falling in Bore Well, both PP and concerned drilling agency shall jointly be held responsible and penal action as per extant Government rules shall be taken.

(Non-compliance of the conditions mentioned above is likely to result in the cancellation of NOC and legal action against the proponent.)

CENTRAL GROUND WATER AUTHORITY

Department of Water Resources, River Development and Ganga Rejuvenation
Ministry of Jal Shakti, Govt. of India

Receipt

(As per the MoJS guidelines dated 24.09.2020 vide SO No. 3289(E) and amendments dated 29.09.2023 vide SO No. 1509(E))
<https://cgwa-noc.gov.in>

Application No.:	21-4/120/AR/IND/2024	Date of Issuance:5/9/2024 5:29:57 PM
Name of Firm:	AETHER ALLOYS LLP	
AppType Category:	Ferrous Metallurgical Steel	
Application Type:	Industrial	
PAN/GSTIN No. of Firm/Individual:	ABKFA4785D / 12ABKFA4785D1ZL	

S N	Description	Amount (Rs.)
1.	Application Processing Fee	10000.00
2.	Ground Water Abstraction charges	
3.	Ground Water Restoration charges	
4.	Environmental Compensation Charges (ECRGW) (Date From to) Days-	24000.00
5.	Penalty for non-Compliance of NOC conditions Condition to be mentioned	100000.00
6.	Adjustment Charges	
7.	Rebate	
8.	Charges for correction/modification in the existing issued No Objection Certificate	
S.No.	Description	Rate
(i)	Change in User ID	Rs. 1000
(ii)	Change in firm Name	Rs. 5000
(iii)	Extension of No Objection Certificate	Rs. 5000
(iv)	Issuance of duplicate No Objection Certificate	Rs. 5000
(v)	Issuance of corrigendum to No Objection Certificate	Rs. 5000
(vi)	Any other items/correction etc.	Rs. 500
Rs. Rupees One Lakh Fifty Two Thousand Only		152000.00

This is an system generated invoice, hence, does not require ink signed.

Term and conditions:

- i. All disputes are subject to Delhi Jurisdiction.
- ii. Any complaint in regard to the rates will not be entertained.

Member-Secretary
CGWA, New Delhi

CENTRAL GROUND WATER AUTHORITY

GOVERNMENT OF ARUNACHAL PRADESH
OFFICE OF THE ADDITIONAL DEPUTY COMMISSIONER
RUKSIN, EAST SIANG DISTRICT

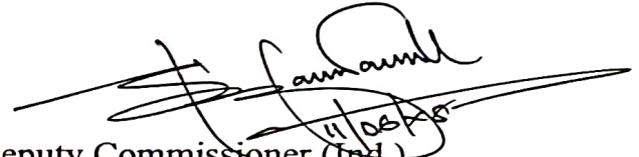
NO.RKN/JUDL-1022/18

Dated Ruksin, the 11th June/2018

TO WHOM IT MAY CONCERN

This is to certify that there is no objection from the undersigned for the Establishment of Ferro Silicon/Ferro Alloys Industry at IGC Niglok, under Ruksin Circle, East Siang Dist

Certified that this NOC is being issued to Ferro Alloys, Iron & Steel after scrutiny of necessary documents submitted to this office.


Addl. Deputy Commissioner (Ind.)

Ruksin

East Siang District (A.P)

Addl. Deputy Commissioner

RUKSIN

East Siang District (A.P.)

ANNEXURE R-5/13

162

केन्द्रीय प्रदूषण नियंत्रण बोर्ड

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CENTRAL POLLUTION CONTROL BOARD
(MINISTRY OF ENVIRONMENT, FORESTS & CLIMATE CHANGE, GOVT. OF INDIA)
REGIONAL DIRECTORATE (NORTH - EAST)
CTO BUILDING, GROUND FLOOR - II, SHILLONG - 793001



CM-13014/5/2025-TECH-RD-SHILLONG-RD (Shillong)

Dated Shillong: 06.10.2025

To,

The Member Secretary
Arunachal Pradesh State Pollution Control Board
Paryavaran Bhawan, Papu Hill, Yupia Road
Naharlagun

Sub: Site inspection and monitoring of Ambient air, Noise monitoring & stack monitoring of M/s Aether Alloys LLP – Reg.

Madam,

This has reference to your letter no. APSPCB-298/2018/AALLP/1750-52 dated 05.09.2025 requesting CPCB to inspect M/s Aether Alloys LLP, East Siang District, Arunachal Pradesh and to conduct ambient air, noise as well as emission monitoring. As intimated, the inspection and monitoring were carried out by CPCB during September 23-25, 2025. The detailed monitoring report is enclosed herewith.

It is observed that the industry has installed highly efficient air pollution control devices to maintain emission concentration below 25mg/Nm³ against the applicable standard of 150mg/Nm³ and the Industry is able to bring down its PM emission level to less than 5mg/Nm³. The industry has installed online continuous emission monitoring system (OCEMS), which was found in working condition.

आपका विश्वासी,

Encl. as above

**Signed by Shantanu Kumar
Dutta**
Date: 06-10-2025 18:05:51

डॉ. शांतनु कुमार दत्ता
क्षेत्रीय निदेशक

Mobile: +91-9436334978

email: zoshillong.cpcb@nic.in



Central Pollution Control Board
Regional Directorate North East, Shillong

Inspection Report

Name of the Industry: M/s Aether Alloys LLP, Industrial Growth Center, Niglok-Ngorlung, PO/PS Ruskin, East Siang District, Arunachal Pradesh.

Background

Member Secretary, Arunachal Pradesh State Pollution Control Board, vide letter no. APSPCB-298/2018/AALLP/1750-52 dated 05.09.2025, requested Central Pollution Control Board, Regional Directorate, Shillong to conduct site inspection as well as Emission and Ambient Air Quality Monitoring at M/s Aether Alloys LLP, Industrial Growth Center, Niglok-Ngorlung, PO/PS Ruskin, East Siang District, Arunachal Pradesh in order to assess the present status of compliance of Environmental norms by the unit.

Site Visit

A team of CPCB visited the industry and carried out Emission and Ambient Air Quality Monitoring including noise monitoring during September 23-25, 2025. The CPCB team comprised of the following officials;

1. Dr. Shantanu Kr. Dutta, Sc 'E'
2. Sh. Shiv Kumar Gupta, Sc 'B'
3. Dr. W. J. Kharbhih, SRF
4. Sh. Mangal Murmu, Field Assistant

Findings and Observations

M/s Aether Alloys LLP is a Ferro Alloy Unit that produces Ferro Silicon (FeSi , Fe_2Si , FeSi_2). The unit operates two electric submerged arc furnaces of capacity 9.0 MVA each. Quartz, which is the prime raw material for a Ferro Silicon Industry, is the mineral ore used in the industry for production of Ferro Silicon. Low Ash Metallurgical Coke (LAMC), Charcoal, Mill Scale, etc. are the other raw materials used by the industry.

Source of Emission and Control System

Emission generated from the submerged arc furnaces is the main source of emission in a Ferro Alloy Industry. The unit operates a scientifically designed Air Pollution Control Devices (APCD) comprising of air cooling system, multi cyclones and bag house system. The APCD, namely gas cleaning plant (GCP), is designed and installed by M/s Thermax Ltd., which is a reputed OEM in the filed of manufacturing of APCD. It is observed that the GCP is designed to achieve a PM concentration level at discharge point at $25\text{mg}/\text{Nm}^3$ against the industry specific emission standard of $150\text{mg}/\text{Nm}^3$.

The unit has installed pneumatic conveyor system to collect the dust collected from the bag filter hopper. A flue dust densifier is also being installed by the unit as a value addition measure for proper collection and disposal of flue dust collected through the APCD (Photograph 1).

The unit has installed a chimney of 40m high, connected to the discharge point of APCD, to release the treated emission (Photograph 2). Proper monitoring platform and sampling porthole have been provided by the unit.

Emission Monitoring Result

Two (2) emissions samples were collected and analysed from the chimney connected to the GCP. The emission monitoring result is tabulated below (Table- 1).

Table 1: Emission concentration

Emission samples	Parameter monitored	Observed concentration (mg/Nm ³)	Emission standard (mg/Nm ³)
Sample 1	Particulate matter (PM)	2	150
Sample 2	Particulate matter (PM)	2	150

Detailed monitoring data sheet, published through Laboratory Instrument Management System (LIMS), as practiced by CPCB, is annexed (Annexure-I).

It is observed that the industry is able to maintain the emission level at a very low level (2mg/Nm³) comparing to the emissions standard (150mg/Nm³) applicable to a Ferro Silicon plant that uses electric submerged arc furnace.

It is also visually apparent that the emission from the plant, while in operation, is at the lowest level (Photographs 3 & 4).

Fugitive Emission and Control

The raw material feeding point at the electric submerged arc furnace is the main source of fugitive emission in a ferro silicon industry. M/s Aether Alloys LLP installed proper coverage around the material feeding point of the furnace with efficient suction system to control the fugitive emission (Photograph 5). The suction duct is connected to the APCD device without any leakage.

Tapping of molten metal generates fugitive emission in such an industry. However, for the instant case, the industry has installed proper fugitive emission control system through efficient suction and connecting the ducts to the APCD (Photograph 6).

Ambient Air Monitoring

M/s Aether Alloys LLP is set up in a premise covering 14.58 acre area and as such it is having enough space to house the raw material storage yard and product storage yard. Ambient Air Quality monitoring (Photograph 7) were carried out in two (2) locations within the industrial premises. It is observed that the Ambient Air Quality Standards with respect to PM 2.5, PM 10, SO₂ and NO₂ were well within the National Ambient Air Quality Standards. The following Table-2 includes the measured Ambient Air Quality values against National Standards.

Central Pollution Control Board
Regional Directorate North East, Shillong

Table 2: Ambient Air Quality

Sampling location	Sampling location 1 -Weigh Bridge (27.887706N, 95.238926E)	Sampling location 2- Near Oxygen Tank (27.887977N, 95.237642 E)	National Standard annual average	National Standard daily average
PM 2.5 ($\mu\text{g}/\text{m}^3$)	8	17	40	60
PM 10 ($\mu\text{g}/\text{m}^3$)	16	30.51	60	100
SO ₂ ($\mu\text{g}/\text{m}^3$)	1.23	1.06	50	80
NO ₂ ($\mu\text{g}/\text{m}^3$)	2.85	3.56	40	80

Detailed monitoring data sheet, published through Laboratory Instrument Management System (LIMS), as practiced by CPCB, is annexed (Annexure-II).

Sound level monitoring

Sound level was monitored on 24th September, 2025 at five locations inside the plant premises. The observed sound level at these locations inside the plant have been tabulated in Table 3 below.

Table-3: Sound level monitoring data

Sl. No.	Sampling location	Observed values (dBA)	Applicable standards (dBA)
1.	Weigh-bridge (27.88781 N, 95.23883 E)	67.6	75dBA (day time)
2.	Entrance gate (27.88821 N, 95.23918 E)	59.9	
3.	Oxygen tank (27.88802 N, 95.23722 E)	64.4	
4.	Charcoal yard (27.88689 N, 95.23861 E)	64.5	70dBA (night time)
5.	Raw material stock yard (27.88729 N, 95.23902 E)	58.9	

Detailed noise monitoring data is included in Annexure-III. It is observed that sound level is not exceeded the National Noise Standard while the plant is in operation.

Comments

It is observed that the industry is well equipped with sophisticated APCD for control of source as well as fugitive emission. The Ambient Air Quality as well as Ambient Noise level are also maintained well within the respective standards.

-sd-
Shiv Kumar Gupta
Scientist 'B'

**Signed by Shantanu Kumar
Dutta**
Date: 06-10-2025 18:17:16

Shantanu kr. Dutta
Scientist 'E'

Central Pollution Control Board
Regional Directorate North East, Shillong

Photographs



Photograph 1: APCD/GCP installed in M/s Aether Alloys LLP



Photograph 2: Chimney of 40m high connected with APCD/GCP



Central Pollution Control Board
Regional Directorate North East, Shillong



Photograph 3: The plant is in operation without any visible emission from the chimney



Photograph 4: M/s Aether Alloys LLP

Central Pollution Control Board
Regional Directorate North East, Shillong



Photograph 5: The furnace is covered to control fugitive emission



Photograph 6: Tapping point of metal is connected with APCD device

Central Pollution Control Board
Regional Directorate North East, Shillong



Photograph 7: Ambient Air Quality Monitoring



1. रिपोर्ट संख्या और जारी करने की तारीख Report No. & Date of Issue	: RD-SHIL/2526/APP/00009,03/10/2025
2. नमूने पंजीकरण संख्या और दिनांक Samples Registration No. & Date	: RD-SHIL/APP/2526/SR00008,30/09/2025
3. नमूना प्राप्ति की तिथि Date of Sample Receipt	: 30/09/2025
4. नमूना विश्लेषण अवधि Sample Analysis Period	: 30/09/2025 03/10/2025
5. नमूना लेने का स्थान Sampling Location	: M/S Aether Alloy LLP
6. नमूना लेने की तिथि Date & Time Of Sampling	: 24/09/2025 00 00 AM
7. नमूनाकरण योजना प्राथमिकता Sampling Plan Preference	: N/A
8. Monitoring coordinated by समन्वित निगरानी	: Dr. S. K. Dutta
9. सैपलिंग टीम Sampling Team	:
10. विश्लेषण अनुरोध प्रभाग/संगठन Report sent to	: RD Shilong
11. रिपोर्ट स्थिति Report Status	: Final
12. नमूने का स्रोत (स्टैक संलग्न है) Source of Sampling(Stack Attached With)	: Furnace
13. नमूनाकरण के दौरान पर्यावरण की स्थिति Environmental conditions during sampling	: 308 Pressure
14. ग्रिप गैस वेग Flue gas Velocity(m/s)	:
15. ढेर तापमान Stack Temperature(K)	: 372

Flue gas analyzer readings (Parameters)

Carbon Dioxide(CO ₂)%	Oxygen(O ₂)%	Carbon Monoxide(CO) ppm
1.31	3	380

कणिका तत्व PARTICULATE MATTER

Sr. No	Field Code	Parameter Name	Sample Matrix	Unit	Result val
1	SS1	Particulate Matter	PARTICULATE MATTER	mg/Nm ³	2
2	SS2	Particulate Matter	PARTICULATE MATTER	mg/Nm ³	2

Remarks (if any) :

Statement : 1. परिणाम केवल परीक्षण किए गए नमूनों से संबंधित हैं। The results relate only to the samples tested.

2. पूरी रिपोर्ट को छोड़कर दोबारा प्रस्तुत नहीं किया जाएगा। सीपीसीबी की लिखित मंजूरी के बिना। The report shall not be reproduced except in full, without the written approval of the laboratory.

3. पैरामीटर NABL मान्यता, ISO-17025 2017 (प्रमाणपत्र संख्या TC-7723) के दायरे में है। The parameter is under the scope of NABL accreditation, ISO-17025 2017 (Certificate No.TC-7723).

Parameter Name	Test Method	Unit	Limit of Detection	Uncertainty of Measurement
Particulate Matter	IS : 11255 (Part 1) - 1985	mg/Nm ³	1	

Analyst	Supervisor	Reviewed by (Lab Incharge)
S.K. M. Mihsill	Ananda Kumar Ngangom	Arnab Mandal

Doc:	Issue No:	Revision No:	Issue Date:01/01/0001	Revision Date:01/01/0001
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* END OF REPORT आख्या समाप्ति *



ANALYSIS REPORT (SAMPLE)
CENTRAL POLLUTION CONTROL BOARD
REGIONAL DIRECTORATE – SHILLONG

BSNL NE – I, TELECOM Circle, CTO Building, Ground Floor, Shillong - 793001

1.	रिपोर्ट संख्या और जारी करने की तारीख Report No. & Date of Issue	: RD-SHIL/2526/APP/00007,03/10/2025
2.	नमूने पंजीकरण संख्या और दिनांक Samples Registration No. & Date	: RD-SHIL/APP/2526/SR00010,03/10/2025
3.	नमूना प्राप्ति की तिथि Date of Sample Receipt	: 03/10/2025
4.	नमूना विश्लेषण अवधि Sample Analysis Period	: 03/10/2025 03/10/2025
5.	नमूना लेने का स्थान Sampling Location	: Weigh Bridge, M/s Aether Alloy LLP, East Siang District, Arunachal Pradesh (27.887706N, 95.238926E)
6.	नमूना लेने की तिथि Date & Time Of Sampling	: 23/09/2025 5:00 PM to 24/09/2025 5:00PM
7.	नमूनाकरण योजना प्राथमिकता Sampling Plan Preference	: N/A
8.	Monitoring coordinated by समन्वित निगरानी	: Dr. Shantanu Dutta
9.	सैंपलिंग टीम Sampling Team	: Sh. S.K. Gupta, Dr. W.J. Kharbhih, Sh. Mangal Murmu
10.	विश्लेषण अनुरोध प्रभाग/संगठन Report sent to	: RD Shilong
11.	रिपोर्ट स्थिति Report Status	: Final
12.	क्षेत्र अवलोकन Field Observation	:
13.	जलवायु की स्थिति Climatic Condition	: clear

कणिका तत्व PARTICULATE MATTER

Sr. No	Field Code	Parameter Name	Sample Matrix	Unit	Result val
1	B433, B432, B434	Particulate Matter (PM 10)	PARTICULATE MATTER	µg/m3	16
2	220261576	Particulate matter (PM2.5)	PARTICULATE MATTER	µg/m3	8

अन्य प्रदूषक OTHERS POLLUTANTS

Sr. No	Field Code	Parameter Name	Sample Matrix	Unit	Result val
1	S_Aether_W	SO2	GASEOUS-SO2	ug/m3	1.23
2	N_Aether_W	NO2	GASEOUS-NOX	ug/m3	2.85

Remarks (if any) : Weighted Average Result

Statement : 1. परिणाम केवल परीक्षण किए गए नमूनों से संबंधित हैं। The results relate only to the samples tested.

2. पूरी रिपोर्ट को छोड़कर दोबारा प्रस्तुत नहीं किया जाएगा। सीपीसीबी की लिखित मंजूरी के बिना। The report shall not be reproduced except in full. without the written approval of the laboratory.

3. पैरामीटर NABL मान्यता, ISO-17025:2017 (प्रमाणपत्र संख्या TC-7723) के दायरे में है। The parameter is under the scope of NABL accreditation, ISO-17025:2017 (Certificate No. TC-7723).

Parameter Name	Test Method	Unit	Limit of Detection	Uncertainty of Measurement
NO2	Modified Jacob & Hocheiser method	ug/m3	0	
Particulate Matter (PM 10)	IS 5182 (Part – 23) 2006 Re-affirmed 2017	µg/m3	0	
Particulate matter (PM2.5)	IS 5182 (Part – 24) 2019 CB/CL/SOP/AQ/10	µg/m3	0	
SO2	Improved West and Gaeke Method	ug/m3	0	

Analyst S.K. M. Mihsill	Supervisor Ananda Kumar Ngangom	Reviewed by (Lab Incharge) Arnab Mandal
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		Revision Date:01/01/0001

Print Date: 06 Oct 2025

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* END OF REPORT आख्या समाप्ति *



ANALYSIS REPORT (SAMPLE)
CENTRAL POLLUTION CONTROL BOARD
REGIONAL DIRECTORATE - SHILLONG

BSNL NE - I, TELECOM Circle, CTO Building, Ground Floor, Shillong - 793001

1. रिपोर्ट संख्या और जारी करने की तारीख Report No. & Date of Issue	: RD-SHIL/2526/APP/00008,03/10/2025
2. नमूने पंजीकरण संख्या और दिनांक Samples Registration No. & Date	: RD-SHIL/APP/2526/SR00011,03/10/2025
3. नमूना प्राप्ति की तिथि Date of Sample Receipt	: 03/10/2025
4. नमूना विश्लेषण अवधि Sample Analysis Period	: 03/10/2025 03/10/2025
5. नमूना लेने का स्थान Sampling Location	: Near Oxygen Tank, M/s Aether Alloy LLP, East Siang District, Arunachal Pradesh (27.887977 N, 95.237642 E)
6. नमूना लेने की तिथि Date & Time Of Sampling	: 24/09/2025 6:00 PM to 25/09/2025 6:00 AM
7. नमूनाकरण योजना प्राथमिकता Sampling Plan Preference	: N/A
8. Monitoring coordinated by समन्वित निगरानी	: Dr. Shantanu Dutta
9. सैपलिंग टीम Sampling Team	: Sh. S.K. Gupta, Dr. W.J. Kharbhih, Sh. M. Murmu
10. विश्लेषण अनुरोध प्रभाग/संगठन Report sent to	: RD Shillong
11. रिपोर्ट स्थिति Report Status	: Final
12. क्षेत्र अवलोकन Field Observation	:
13. जलवायु की स्थिति Climatic Condition	: clear

कणिका तत्व PARTICULATE MATTER

Sr. No	Field Code	Parameter Name	Sample Matrix	Unit	Result val
1	B435, B436	Particulate Matter (PM 10)	PARTICULATE MATTER	µg/m3	30.51
2	220261575	Particulate matter (PM2.5)	PARTICULATE MATTER	µg/m3	17

अन्य प्रदूषक OTHERS POLLUTANTS

Sr. No	Field Code	Parameter Name	Sample Matrix	Unit	Result val
1	S_Aether_O	SO2	GASEOUS-SO2	ug/m3	1.06
2	N_Aether_O	NO2	GASEOUS-NOX	ug/m3	3.56

Remarks (if any) : Weighted Average

Statement : 1. परिणाम केवल परीक्षण किए गए नमूनों से संबंधित हैं। The results relate only to the samples tested.

2. पूरी रिपोर्ट को छोड़कर दोबारा प्रस्तुत नहीं किया जाएगा। सीपीसीबी की लिखित मंजूरी के बिना। The report shall not be reproduced except in full, without the written approval of the laboratory.

3. पैरामीटर NABL मान्यता, ISO-17025:2017 (प्रमाणपत्र संख्या TC-7723) के दायरे में है। The parameter is under the scope of NABL accreditation, ISO-17025:2017 (Certificate No.TC-7723).

Parameter Name	Test Method	Unit	Limit of Detection	Uncertainty of Measurment
NO2	Modified Jacob & Hoicheiser method	ug/m3	0	
Particulate Matter (PM 10)	IS 5182 (Part - 23) 2006 Re-affirmed 2017	µg/m3	0	
Particulate matter (PM2.5)	IS 5182 (Part - 24) 2019 CB/CL/SOP/AQ/10	µg/m3	0	
SO2	Improved West and Gaeke Method	ug/m3	0	

Analyst

Manimita Das

Supervisor

Ananda Kumar Ngangom

Reviewed by (Lab Incharge)

Arnab Mandal

Doc: Issue No: Revision No: Issue Date:01/01/0001 Revision Date:01/01/0001

Print Date: 06 Oct 2025

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* END OF REPORT आख्या समाप्ति *



केन्द्रीय प्रदूषण नियंत्रण बोर्ड

CENTRAL POLLUTION CONTROL BOARD
(Ministry of Environment, Forests & Climate change,
Govt. of India)



Regional Directorate -North East
CTO Building, Ground Floor, Shillong – 793001
Email: zoshillong.cpcb@nic.in

Noise Monitoring Report

Date: 06-10-2025

Name of the Industry: M/s Aether Alloy LLP, IGC niglok-ngorlung, East Siang District, Arunachal Pradesh

Date of Monitoring : 24th September, 2025

Sampling Location: The noise level at various location inside the premise of the industry is recorded as mentioned here in under:

S.No.	Location (in the premise of Industry)	Latitude, Longitude	Observed Value (Leq. in dB(A))	Average Leq. (dB(A)) (Day/Night)	Applicable Standard* (in dB(A))
1.	Near Weigh-bridge	27.88781 N, 95.23883 E	67.6	~64.4 (at daytime)	75
2.	Near Entrance Gate	27.88821 N, 95.23918 E	59.9		
3.	Near Oxygen tank	27.88802 N, 95.23722 E	64.4		
4.	Near Charcoal Store	27.88689 N, 95.23861 E	64.5	~62.5 dB (at night)	70
5.	Near raw material stockyard	27.88729 N, 95.23902 E	58.9		

*Note: The applicable standard is as per the Noise Pollution (Regulation and Control) Rules, 2000.

Dr. W.J. Kharbhih
(SRF)

Sh. S.K. Gupta
(Scientist 'B')

Sh. Arnab Mandal
(Scientist 'B')

Dr. S.K. Dutta
(Regional Director)