

BEFORE THE NATIONAL GREEN TRIBUNAL SOUTHERN ZONE,
CHENNAI

O.A. No. 230 of 2025

S. Murugesan

Applicant

-V-

The Union of India & 4 Others

Respondents

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Dated at Chennai this the 7th day of January 2026.


Counsel for Respondent - 2

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BEFORE THE NATIONAL GREEN TRIBUNAL SOUTH ZONE AT CHENNAI

O.A No. 230 of 2025

S.Murugesan,
Porkaali Amman koil street, 1st cross street,
Kattukuppam, Ennore, Kattivakkam, Tiruvallur,
Tamil Nadu – 600 057.

:Applicant

Versus

1.Union of India,
Represented by its Secretary,
The Ministry of Environment,
Forests and Climate Change,
Jorbagh, New Delhi

2.North Chennai Thermal Power Station,
Represented by its Chief Engineer,
Athipattu, Chennai
Thiruvallur District – 600 1202.

3.Tamil Nadu Power Generation Corporation Limited (TNPGL),
Represented by its Managing Director,
7th floor, NPKRR Maaligai,
Anna Salai,
Chennai – 600 002.

4.The Tamil Nadu Pollution Control Board,
Represented by its Member Secretary,
No.76, Mount Salai, Guindy,
Chennai – 600 032.


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NORTH CHENNAI THERMAL POWER STATION
TNEB, CHENNAI-600 120.

5.The Tamil Nadu Coastal Zone

Management Authority,

Represented by its Member Secretary,

No.1, Jeenis Road, Panagal Building,

Ground floor, Saidapet, Chennai – 600 015.

: Respondents

COUNTER AFFIDAVIT OF 2nd RESPONDENT

I, K.Muthukrishnan, Son of Kandhan, aged about 59 years Hindu, working as Chief Engineer, TANGEDCO, having office at North Chennai Thermal Power Station -I, Chennai- 600 120, do hereby solemnly affirm and sincerely states as follows:-

1. I am the 2nd respondent herein and I am filing this affidavit on behalf of the 3rd respondent also and I am competent to swear this affidavit on behalf of the 3rd respondent.
2. At the outset, we deny all allegations and averments mentioned in application para no.1 to 9 and its ground are false and misleading and applicant is put to strict to strict proof of the same. All allegations are specifically denied and those allegations are not denied need not taken as admission and the same is also denied.
3. I admit para no.1 of application and states that the 2nd Respondent operates North Chennai Thermal Power Station Stage-I (3 × 210 MW) and Stage-II (2 × 600 MW). It is submitted that Stage-III and SEZ TPP are separate projects with independent statutory clearances. The present Original Application does not pertain to operation of Stage-III or SEZ TPP ash systems, and no ash slurry from NCTPS-III is conveyed through NCTPS-I ash slurry disposal lines. Subject matter of allegations pertains only to the Stage I and II alone.
- 4.I deny para no.2 of the application is false and misleading and states that all five (5) Ash Slurry Disposal Lines (ASDL-1 to ASDL-5) of NCTPS-I have been fully replaced between 2021 and 2025 in compliance with the directions of this Hon'ble Tribunal, at a total expenditure of ₹25.7682 Crores. The photographs relied upon by the Applicant depict either: Minor O-ring weepages at sleeve couplings, or Leakages from Recovery Water Lines carrying decanted saline water, and do not depict discharge of wet ash



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slurry at any location. The interpretation sought to be drawn by the Applicant from the photographs is therefore technically incorrect and misleading.

5. I deny para No.3 of the application is also false and misleading and states that it is specifically denied that ash is conveyed through "unlined" pipelines or that ash ponds are leaking into the environment as alleged. The Ash Slurry Disposal Lines are internally cast-basalt lined, specifically designed for abrasion resistance. The OEM technical superiority of Cast Basalt lined pipes enclosed. The present application itself states that issues relating to ash ponds are reserved for separate proceedings; hence such averments are irrelevant and beyond the scope of the present OA, which is confined only to alleged pipeline leakages. No wet ash slurry discharge into wetlands has occurred from NCTPS-I pipelines.

6. I admit para No.4 of the application and states that directions were issued by this Hon'ble Tribunal in OA No. 08 of 2016. It is respectfully submitted that all such directions relating to replacement of pipelines have been complied with in full. The timelines, expenditures, and commissioning dates of each ASDL have already been placed on record through affidavits and extension applications, which remain undisputed. The allegation of non-compliance is therefore factually incorrect and made of the purpose of this case.

7. I deny para No.5 of the application are false and misleading and states that The allegation that the Respondents constructed "illegal pipelines" are specifically denied. With respect to Stage-III pipelines, this Hon'ble Tribunal has already passed orders in OA No. 122 of 2021, and the Respondents are strictly adhering to the directions therein. The present OA relates to NCTPS-I pipelines, all of which have been replaced as directed. No ash slurry from Stage-III is conveyed through NCTPS-I systems.

8. I admit para No.6 of the application and states that extensions of time were sought and granted by this Hon'ble Tribunal. It is submitted that such extensions were sought transparently, granted by judicial orders, and fully acted upon. The replacement works were completed within the extended timelines approved by this Hon'ble Tribunal, and the same cannot now be portrayed as non-compliance.



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9. I deny para No.7 of the application is misleading and false and states that the allegation that old pipes were reused or that joints are "severely rusted" is specifically denied. External surface corrosion visible in certain photographs is due to: Continuous exposure to saline coastal atmosphere, and High humidity conditions, and does not indicate reuse of old pipes nor any internal failure. All ASDLs are internally cast-basalt lined and structurally sound. Preventive painting proposals for ASDL-2 and ASDL-3 have already been submitted and are scheduled for completion before May 2026, as a proactive corrosion-control measure.

10. I deny para no.8 of the application is also false and misleading and states that it is specifically denied that no action has been taken on representations. 2nd respondent stalled 24x7 patrolling of pipeline corridors, whenever leakage is found immediate stoppage of pumping upon detection of abnormalities are cured by means of team appointed in this regard. Instant replacement of O-rings or repair of minor defects and removal of any deposited material, if noticed repaired on the spot. As far as the allegation that leakages were attended by "cloth plugging" is technically untenable, as ash slurry is conveyed at pressures where such measures are impossible. Cloth seen in photographs is not a sealing method. It may be incidental by an act of outsiders since the pipes are laid in an open corridor.

11. I further submit that 2nd respondent fully renewed all ash slurry disposal lines, maintained continuous compliance with consent conditions, and undertaken additional preventive measures including painting and phased replacement of recovery water lines.

12. Therefore, present OA is nothing but abuse of process of law and filed with oblique motive and based misinterpretation of photographs and incorrect technical assumptions, and does not disclose any continuing environmental violation by NCTPS-I.

13. I submit that we have filed present status of pipe lines by means of photographs in typed set filed along with this counter with description. Subject matter of leakage are only in water line pipes alone and the same were arrested and except some wear and tear and there is no major leakage and therefore apprehension projected by the application only for purpose of filing this case.



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14. I deny ground No.A of the application and states that leakage only in respect of recovery water lines and same was arrested and photographs were filed in the typed set.

15.I deny ground no.B of the application and states that new pipes were laid as per orders of this Hon'ble court. Present pipe lines are new and no leakage in ash pipe line except in joints and the same is replaced with new joints and running without any leakages.

16. I deny ground no.C and states that 2ndd respondent is following orders of the Hon'ble Tribunal and filed compliance report. Applicant is repeating the same allegations is plethora of application pending on the file of this Hon'ble court.

17. I deny ground no.D and states that alleged leakage are from recovery waterline and that too are arrested and process of replacing the water lines.

18. I deny ground no.E and states that all alleged leakage are arrested and appointed 24/7 patrol to monitor the leakage and they are on their duty and maintaining pipes lines without any leaks.

19.I deny ground no.F and states that respondent no.2 is complying are regulation and maintaining the plant and giving energy for the city of Chennai 24/7 any adverse impact will ruined the Metropolitan city without any supply and it will affect day today activities of entire city.

20. I deny ground no.G and states that right to energy also originate from Article 21 of constitution of India. This respondent no.2 is serving the state of Tamil nadu 24/7 without any rest. This respondent is complying with all norms and running the plant without violating pollution norms.

21. I submit that present OA is nothing but abuse of process of law and we are running 24/7 to give uninterrupted supply of electricity to the state of Tamil nadu and present prosecution disturbed our day today activities and affects production capacity.


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It is therefore prayed that this Hon'ble court may be pleased to dismiss this OA with exemplary cost and thus render justice.

Solemnly affirmed at Chennai

-BEFORE ME-

This the 7th day of January 2026

And signed his name in my presence

Advocate: Chennai


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NORTH CHENNAI THERMAL POWER STATION
TNEB, CHENNAI-600 120.

Before me,

G. S. S. S. S.

(M/1745/11)

(Advocate, Chennai)



Manufacturers of Alumina Ceramic,
Cast Basalt & Resin Bonded Ceramics

To,
Office of The Chief Engineer
North Chennai Thermal Power Station-I
Chennai-600120
Ph: 044-27950061
Email: eemmncpts@tnebnct.org

Subject: Technical Superiority of Cast Basalt Lined Pipes over Unlined MS Pipes for Ash Slurry Pipelines.

Dear Sir,

Cast basalt lined pipes offer significant technical advantages over unlined mild steel (MS) pipes, particularly in demanding applications such as ash slurry pipelines. This letter outlines a clear, structured comparison between Basalt Lined Pipes (BLP) and Unlined Steel Pipes, focusing on performance, cost, durability, and suitability.

1. Material Overview

Feature	Basalt Lined Pipe	Unlined Steel Pipe
Base Material	Steel pipe with basalt lining	Plain carbon steel
Lining Purpose	Protects against corrosion, abrasion & chemical attack	No internal protection against corrosion & erosion
Typical Use	Highly abrasive ash slurry when conveyed through cast basalt pipes; very smooth surface occurs even after solid particle impingement. Basalt protects pipe internal surface smoothness and results in low flow resistance and pressure loss over time	In MS pipes, Ash slurry causes non-uniform erosion leading to loss of internal surface smoothness and a consequent increase in hydraulic resistance.

2. Performance Comparison

2.1 Corrosion Resistance

- **Basalt Lined Pipe:** Excellent resistance to corrosion from acids, alkalis, seawater, and many chemicals due to the basalt layer.
- **Unlined Steel:** Susceptible to rust/corrosion when exposed to moisture, chemicals, or aggressive fluids.

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2.2 Abrasion Resistance

- **Basalt Lined Pipe:** Very high abrasion resistance — basalt lining is harder than steel, ideal for slurry, sand, and particulate flows.
- **Unlined Steel:** Poor abrasion resistance; high wear rates with abrasive fluids.

2.3 Flow Efficiency

- **Basalt Lined Pipe:** Smooth internal surface improves flow and reduces friction losses.
- **Unlined Steel:** Rough interior, leading to higher friction and pressure loss over time due to corrosion/roughening.

2.4 Mechanical Strength

- **Basalt Lined Pipe:** Combines strength of steel with protective lining; good resistance to pressure.
- **Unlined Steel:** Strong load-bearing capacity; well-understood mechanical properties.

Cast basalt lining, provides exceptional hardness (Mohs scale 8) that withstands the erosive action of ash slurries far better than unlined MS pipes, which suffer rapid wear from abrasive particles. In slurry transport, unlined MS pipes can erode by several millimetres per year, while basalt-lined pipes maintain integrity for decades.

Unlined MS pipes corrode quickly in wet, acidic ash slurries due to their iron content, leading to pitting and leaks. Basalt lining acts as an inert barrier, preventing chemical attack and extending operational reliability in corrosive environments.

3. Cost & Economics

Cost Factor	Basalt Lined Pipe	Unlined Steel Pipe
Initial Purchase Cost	Higher (due to lining process)	Lower
Installation	Comparable labour cost	Lower
Maintenance	Lower (less frequent replacements)	Higher (due to corrosion)
Lifecycle Cost	Lower over long term operation	High due to higher rate of erosion

Although initial costs are higher, the extended lifespan and lower total ownership costs make basalt-lined pipes economically superior, often saving 40-60% over the project lifecycle versus repeated MS pipe replacements.


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Summary:

- **Unlined Steel:** Lower upfront cost
- **Basalt Lined:** Better total lifecycle economics for corrosive/abrasive environments

4. Installation & Fabrication

Basalt Lined Pipe

- Pipes are built with basalt lining fixed inside steel Pipe.
- Once installed lasts for 5-7 years, so no maintenance required.

Unlined Steel Pipe

- Frequent patch welding is required due to high erosion.
- Standard installation with normal procedures.

5. Maintenance & Service Life

Metric	Basalt Lined	Unlined Steel
Corrosion Maintenance	Minimal	Frequent
Abrasion Wear-Out	Slow	Fast
Expected Life in Harsh Service	10-30+ years	2-5 years (varies greatly)
Repair Cost	Low	High over operation period of 5 years.

Basalt-lined pipes achieve service lives of 10-30 years in high-abrasion slurry lines, compared to 2-5 years for unlined MS pipes, drastically reducing downtime and replacement costs. Maintenance is minimal, with no need for frequent coatings or repairs.

6. Typical Applications

Best Application Basalt Lined Pipe

- Slurry lines (mining, dredging) & Power plants (ash, cooling water lines)
- High solids concentration fluid transport
- Chemical industries with acidic/alkaline streams
- Seawater intake/outfall systems

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Best Application of Unlined Steel Pipe

- Clean water distribution and Low-corrosive oil & gas pipelines
- HVAC and general structural piping
- Compressed air, steam lines (non-corrosive)

Conclusion

For applications involving abrasive, corrosive, or aggressive media, cast basalt pipe offers superior resistance to wear and chemical attack, leading to longer service life and potentially lower total cost of ownership in the appropriate service conditions. MS pipes remain a versatile and cost-effective choice in non-aggressive environments or where initial installation cost constraints are paramount, but their performance is closely tied to protective measures and maintenance.

- Choose Basalt Lined Pipe when dealing with abrasive, corrosive, or high-particle fluids — it's often cheaper over the life of the system despite higher upfront cost.
- Choose Unlined Steel Pipe for general, water supply applications where budget and ease of installation are priorities.

We have supplied cast basalt lined pipes for your project, ensuring optimal performance. Please contact us for any further details or query.

Yours faithfully,

SIGNATURE: Ravindra Rawat



DESIGNATION: Techno Commercial Engineer



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