



SRIKALAHASTHI PIPES LIMITED

Regd. Office & Works : Rachagunneri -517641, Srikalahasti Mandal,
Chittoor District A.P. Tel : +91 08578-286650 to 55 Fax : +91 08578-286657/88
Website : www.srikalahasthipipes.com CIN : L74999AP1991PLC013391
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17th August 2019

To
The Member Secretary
APPCB, Head office
D.No. 33-26-14 D/2, Near Sunrise Hospital,
Pushpa Hotel Centre, Chalamalavari Street, Kasturibaipet,
Vijayawada – 520010.


Respected Sir,

Sub: Submission of Environmental Statement (Form-V) for the Year 2018-19

With reference to the above subject Environmental Statement Form-V of M/s. SRIKALAHASTHI PIPES LTD (Pig Iron, DI Spun Pipe, Cement, Coke Oven, Captive Power & STP Divisions) for the year 2018-19 is enclosed for your reference and record please.

Yours faithfully

For SRIKALAHASTHI PIPES LTD


17.8.19
G. Jothi
Sr. Manager
(Environment)

Cc: EE, RO / JCEE, ZO





INSPIRING GROWTH

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR 2018-19



Iron Ore

Caring Environment

Pipe

FORM - V

(See rule 14 as per The Environment(Protection)Rules 1986)

M/s. SRIKALAHASTHI PIPES LTD.

(Pig Iron,DI Spun Pipe, Cement, Coke Oven, Captive Power &
STP Divisions)

Rachagunneri - 517 641, Srikalahasthi Mandal
CHITTOOR DIST.

PART – A

- 1). Name and address of the owner/
Occupier of the industry operation
or process : **M/s. Srikalahasthi Pipes Ltd**
[Pig Iron, DI Spun Pipe, Cement, Coke Oven,
Captive power plant & STP]
:Rachagunneri (Village), Srikalahasthi (M),
: Chittoor-Dt. -517641
- 2). Date of the last environmental
Statement submitted : 28th Sep - 2018
- 3). Year Of Establishment :Pig Iron Division – 1993,
Cement Division - 1995,
Spun pipe division -1997,
COP Division (LAM Coke) -2004
Captive power plant – 2005
STP- 2012
- 4). Production Capacity (Units) :

Div.	CFO Capacity/Annum	Actual Production/Annum (2018-19)
Pig Iron	3,25,000 MT	2,91,955 MT
Spun pipe	3,00,000 MT	2,98,514 MT
Cement	99,000 MT	77,396 MT
Lam Coke	2,43,000 MT	1,79,586 MT
Captive Power(14.5 MW/hr)	127020000 Units	111655800 Units (12.75 MW/hr)
Sewage treatment plant	5 MLD	2.995 MLD
	(18,25,000 KL/Annum)	(10,93,142 KL/Annum)

PART – B

WATER AND RAW MATERIAL CONSUMPTION

PIG IRON DIVISION (Inc. 2.5 MW CPP & Sinter plant)

i)Water Consumption (m³/day)

1.Process and cooling	-	918
2.Domestic	-	<u>15</u>
		<u>933</u>

Name of Products	Water consumption per unit of product output (KL/MT)	
	During the previous financial year (2017-2018)	During the current financial year (2018-2019)

Pig Iron	1.14	1.10
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ii) Raw material consumption:

Name of raw Materials	Name of product	Consumption of raw material per unit of output (MT/M)	
		During the previous financial year (2017-2018)	During the current financial year (2018-2019)
Iron Ore & Sinter	Pig Iron	1.735	1.726
Coke	"	0.513	0.503
Fluxes	"	0.437	0.491

CEMENT DIVISION

i) water Consumption (m³/day)

1.Process and cooling	49.60
2.Domestic	- 6.20
Total	- <u>55.80</u>

Name of Products	Water consumption per unit of products(KL/MT)	
	During the previous financial year (2017-2018)	During the current financial year (2018-2019)

Cement	0.20	0.22
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ii) Raw material consumption:

Name of raw Materials	Name of product	Consumption of raw material per unit of output Kg /MT	
		During the previous financial year (2017-2018)	During the current financial year (2018-2019)
Lime Stone	PSC	665	667.7
Coke Fines	"	110	107.9
Iron Ore Fines	"	21	21.8
Slag	"	470	480.6
Gypsum	"	24	14.8

DI SPUN PIPE DIVISION

i) water Consumption (m³/day)

1.Process and cooling	-	721.5
2.Domestic	-	37.2
Total	-	<u>758.7</u>

Name of Products	Water consumption per unit of products(KL/MT)	
	During the previous financial year (2017-2018)	During the current financial year (2018-2019)
DI Spun pipe	0.844	0.845

ii)	Raw Material Consumption		Consumption of raw materials per unit of output (Kg/MT)	
	Name of raw materials	Name of products	During the previous financial year	During the current financial year
1	Molten Metal	DI Spun pipes	1022	954.4
2	Steel scrap	DI Spun pipes	94	62.1
3	Ferro Silicon	DI Spun pipes	8.8	12.8
4	Cement	DI Spun pipes	109	104.4
5	Sand	DI Spun pipes	156	145.4
6	Zinc	DI Spun pipes	4.7	4.4
7	Mg	DI Spun pipes	1.3	1.35

COKE OVEN DIVISIONi) water Consumption (m³/day)

1.Process and cooling	-	348.48	(12MW CPP effluent water is used, no fresh water is used)
2.Domestic	-	10.50	
Total		<u>358.98</u>	

Water consumption per unit of products(KL/MT)

Name of Products	During the previous financial year (2017-2018)	During the current financial year (2018-2019)
LAM Coke	0.754	0.679

ii) Raw material consumption:

Name of raw Materials	Name of product	Consumption of raw material per unit of output (MT/MT)	
		During the previous financial year (2017-2018)	During the current financial year (2018-2019)
Coking Coal	LAM Coke	1.534	1.584

12 MW POWER PLANT DIVISIONi) water Consumption (m³/day)

1.Process and cooling	-	1341.64
2.Domestic	-	4.88
Total		<u>1346.52</u>

Water consumption per unit of products(Liters /Unit)

Name of Products	During the previous financial year (2017-2018)	During the current financial year (2018-2019)
Electric Power	4.19	4.20

ii) Raw material consumption:

Name of raw Materials	Name of product	Consumption of raw material per unit of output (Ton/Ton)	
		During the previous financial year (2017-2018)	During the current financial year (2018-2019)
Waste heat from coke oven batteries emissions	Electric power	-	-

PART -C

Pollution Discharged to Environment / Unit of output
(Parameter as Specified in the consent issued)

PIG IRON DIVISION

Pollutants	Quantity of Pollutants Discharged (Kg/day)	Concentrations of Pollutants in Discharges(mg/l)	Percentage of variation from prescribed standards with reasons (%)		
a) Water					
1. Total Dissolved Solids	No discharge of water to out side of our complex. The Effluent is treated in ETP and recycling & Evaporating in Non Critical areas at Slag granulation and road sprinkling.				
2. Total Suspended Solids					
3. C.O.D.					
4. B.O.D.					
5. Oil & Grease					
b) Air: Stack Flue Gas					
Stack Attached to	Pollutants	Concentration of Pollutants in Discharge Standard (mg/Nm ³)	Quantity of pollutants discharged kg/day	Concentration of Pollutants in Discharges (mg/Nm ³)	Percentage of variation from prescribed standards with reasons (%)
15 TPH Power plant Boiler	PM	100	10.3	28.66	71.34 %
1x 3 Stoves	PM	100	27.38	27.17	72.83 %
Head ESP	PM	100	114	42.1	57.90 %
Tail ESP	PM	100	74.09	36.75	63.25 %

CEMENT DIVISION

Pollutants	Quantity of Pollutants Discharged (Kg/day)	Concentrations of Pollutants in Discharges(mg/l)	Percentage of variation from prescribed standards with reasons (%)
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a) Water

- | |
|---------------------------|
| 1. Total Dissolved Solids |
| 2. Total Suspended Solids |
| 3. C.O.D. |
| 4. B.O.D. |
| 5. Oil & Grease |

No Effluent Generation from the process

b) Air: Stack Flue Gas

Stack Attached to	Pollutants	Concentration of Pollutants in Discharge Standard (mg/Nm ³)	Quality of pollutants discharge d kg/day	Concentration s of Pollutants in Discharges (mg/Nm ³)	Percentage of variation from prescribed standards with reasons (%)
Cement Mill	PM	100	6.3	23.21	76.79 %
Kilns 1&2 Venturi scrubber	PM	100	27.12	35.32	64.68 %
Raw Mill	PM	100	8.2	29.52	70.48 %
Slag dryer	PM	100	23	38.34	61.66 %

SPUN PIPE DIVISION

Pollutants	Quantity of Pollutants Discharged (Kg/day)	Concentrations of Pollutants in Discharges(mg/l)	Percentage of variation from prescribed standards with reasons (%)
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a) Water

- | |
|---------------------------|
| 1. Total Dissolved Solids |
| 2. Total Suspended Solids |
| 3. C.O.D. |
| 4. B.O.D. |
| 5. Oil & Grease |

No discharge of water to out side of our complex. The Effluent is treated in ETP& RO then recycling & Evaporating in Non Critical areas like pipe cooling, Slag granulation plant and road sprinkling.

b) Air: Stack Flue Gas

Stack Attached to	Pollutants	Concentration of Pollutants in Discharge Standard (mg/Nm ³)	Quantity of pollutants discharged kg/day	Concentrations of Pollutants in Discharges (mg/Nm ³)	Percentage of variation from prescribed standards with reasons (%)
Annealing Furnace-1	PM	100	22	27.1	72.9 %
Zn coating De-dusting System-1	PM	100	31.3	29.71	70.29 %
Bitumen coating 1	PM	100	1.07	22.22	77.78 %
Bitumen coating 2	PM	100	0.86	17.87	82.13 %
Magnesium de-dusting-1	PM	100	25.33	37.34	62.66 %
Mould shop de-dusting	PM	100	9.1	31.77	68.23 %
Annealing Furnace-2	PM	100	6.5	21.38	78.62 %
Pipe cooling air vent	PM	100	8.1	27.02	72.98 %
Magnesium dedusting-2	PM	100	27.4	40.78	59.22 %
Induction Furnace 5x15MT	PM	50	33.13	27.07	72.93 %
Zn coating de dusting-2	PM	100	21.35	31.78	68.22%

Coke Oven Division

Pollutants	Quantity of Pollutants Discharged (Kg/day)	Concentrations of Pollutants in Discharges(mg/l)	Percentage of variation from prescribed standards with reasons (%)		
a) Water					
1. Total Dissolved Solids	No Effluent Generation from the process, Complete Evaporation				
2. Total Suspended Solids					
3. C.O.D.					
4. B.O.D.					
5. Oil & Grease					
b) Air: Stack Flue Gas					
Stack Attached to	Pollutants	Concentration of Pollutants in Discharge Standard (mg/Nm ³)	Quantity of pollutants discharged kg/day	Concentrations of Pollutants in Discharges (mg/Nm ³)	Percentage of variation from prescribed standards with reasons (%)

Battery - I	No flue gas emissions to atmosphere, complete emissions are diverted through waste heat recovery boiler for generation of electric power.
Battery - II	

Power Plant Division

Pollutants	Quantity of Pollutants Discharged (Kg/day)	Concentrations of Pollutants in Discharges(mg/l)	Percentage of variation from prescribed standards with reasons (%)
a) Water			
1. Total Dissolved Solids	Effluent Generation from power plant is being used for coke quenching		
2. Total Suspended Solids			
3. C.O.D.			
4. B.O.D.			
5. Oil & Grease			

b) Air: Stack Flue Gas

Stack Attached to	Pollutants	Concentration of Pollutants in Discharge Standard (mg/Nm ³)	Quantity of pollutants discharged kg/day	Concentrations of Pollutants in Discharges (mg/Nm ³)	Percentage of variation from prescribed standards with reasons (%)
12 MW CPP Boiler stack-1&2	PM	100	87.62	48.68	51.32 %
12 MW CPP Boiler stack-3	PM	100	46.90	37.1	62.9 %
12 MW CPP Boiler stack-4	PM	100	22.19	30.82	69.18%

c) Location wise Ambient Air Quality (micro. gm/ Nm³)

Location	Parameters	AAQ Standards	Actual values	Percentage of variation from prescribed standards with reasons (%)
Cow Shed	PM ₁₀	100	66.88	33.12 %
	PM _{2.5}	60	24.75	58.75 %
	NO _x	80	9.3	88.37 %
	SO ₂	80	9.77	87.78 %

Main Gate	PM ₁₀	100	39	61 %
	PM _{2.5}	60	19.24	67.9 %
	NOx	80	22	72.5 %
	SO ₂	80	18	77.50 %
STP	PM ₁₀	100	61.08	38.92 %
	PM _{2.5}	60	24.58	59.03 %
	NOx	80	22.22	72.22 %
	SO ₂	80	17.10	78.60 %
SPP	PM ₁₀	100	53.96	46.04%
	PM _{2.5}	60	27.46	54.20%
	NOx	80	18.5	76.87%
	SO ₂	80	22.24	72.20%
Coke oven 2 nd Gate	PM ₁₀	100	69.04	30.96%
	PM _{2.5}	60	28.98	51.70
	NOx	80	22.08	72.40%
	SO ₂	80	18.78	76.52%
Near Old STP	PM ₁₀	100	61.10	38.90%
	PM _{2.5}	60	24.64	58.93%
	NOx	80	17.24	78.45%
	SO ₂	80	20.22	74.72%

PART – D

HAZARDOUS WASTE

(As specified under hazardous wastes(Management , handling and Trans boundary Movement) rules,2008/2016)

Hazardous Wastes	Total quantity per year	
	During the previous Financial year (2017-2018)	During the current financial year (2018-2019)
a. From process		
Waste/Used Oil (KL)	45.61	17.573
Used Batteries (Nos)	333	176
Empty paint Drums (Nos)	1493	1542
Zinc Mylar sheets (Kgs)	475	514

b. From pollution control facilities

Zinc Dust (MT)	597.28	543.32
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PART – E**SOLID WASTES**

Total quantity MT per day

	During the previous Financial year (2017-2018)	During the current financial year (2018-2019)
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a)From Process

i)Induction furnace slag	7.50	6.30
ii) Burnt core sand	20.00	20.00
iii) Cement slurry	25.00	21.30
iv) MBF Debris	15.00	13.50
v) Rejected refractory	1.00	1.00

b)From Pollution control facilities

i) Mg. oxide dust	0.100	0.13
ii) Sludge from Gas cleaning plant	13.00	18.11

PART – F

Please specify the characteristics (in terms of quantum) of Hazardous as well as solid wastes and indicates disposal practice adopted for both these categories of wastes.

Hazardous Wastes:

1. Zinc dust(>99% Zn) is being collected from the Zinc de-dusting units and being disposed to APPCB authorized recyclers.
2. Waste oil/ used oil (Used oil from Hydraulics and engines)is being collected and reused for our plant internal consumption. We may dispose to APPCB authorized dealers if unable to reuse in our plant.
3. Used lead acid Batteries being sent to Suppliers as buy back basis.

Non Hazardous waste:

1. MBF Slag (contains silica, Ca, Mg) is being used for Cement manufacturing in our cement plant and remaining quantity being sold to other cement plants.
2. Induction furnace slag(contains Silica) ,burnt core sand(Silica) are being used for reclaiming low laying areas of Industry premises.

3. Gas cleaning plant Sludge(Iron oxide, Cao, MgO, Silica),cement slurry, burnt core sand are used to make Bricks in our brick manufacturing unit and recycling in sinter process.
4. Mg dust(Magnesium Oxide) being recycled in our Sinter process.

PART – G

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

1. on commissioning Sinter plant we have been recycling 100% of our internal generation of Iron ore fines, and other BF raw material fines, MgO dust and Coke fines in our Sinter plant and coke fines and BF Flue dust in Cement plant process.
2. By replacing Iron ore lumps to sinter product for about 80% in BF, we have been conserving Iron ore lumps of around 900 MT /day and also coke consumption reduced by around 800 MT/Year as conservation of natural resources and the cost of production reduced.
3. After commission of our STP water project, we have been continued to conserve ground water around 2600-3000 KLD as a part of our CSR activities.
4. Conservation of EP power 12MW per hour by producing 12MW per hour Captive power through coke oven waste heat recovery process.
5. In the year 2018-19 we have produced 6,88,507 nos. of bricks from solid waste of Cement slurry (805.5 MT), MBF slag (805.5 MT), and gas cleaning plant dust (275.4 MT). These bricks are being used for civil construction in the plant premises.
6. In coke oven plant 10390 m2 coal yard concrete flooring with drain project work completed to control the coal ground loss and to collect the coal washings during rain.
7. 32 KL roof top rain water harvesting structure (ground water soaking) established in MBF coal shed.
8. Goliath cranes are installed in DIP dispatch yard and replaced mobile escort movement, where by eliminating use of HSD.
9. APFC 250 KVAR capacitors installed at COP HT side to maintain the power factor.
10. 450 KVA capacitor bank for LT transformer at DIP to increase the power factor.

11. Installed VFD drives at spinning machines PT trolleys and induction furnace dedusting system, cooling tower MCW pump at 12 MW CPP to achieve energy saving.
12. Installed 1375 KVAR power capacitors in DIP sustain power factor at 0.999, resulting in power saving.
13. Replacement of 3.3KV motor with 11 KV motor for HT blowers in MBF for energy saving.
14. Replacement of 4.5 KW cooling fan of HD blowers with 2.2 KW in MBF for energy saving.
15. Installed 17914 W LED lights in place of conventional of lighting system.

PART – H

Additional measures / investment proposal for environmental protection including abatement of pollution, prevention of pollution.

- 1) Dust on the roads are being cleaned with Road sweeping machine to eliminate the fugitive emission during vehicle movement.
- 2) Water Sprinklers are arranged in Raw material yards to control the fugitive emission during loading and unloading.
- 3) Regularly Control equipments Bag house Filter bags are being replaced to control the stack emission.
- 4) 2 Nos bag filters installed in COP Coke cutter and screening area to control fugitive emission.
- 5) One bag filter installed at MBF BC-8 material transfer point to control fugitive emission.
- 6) One dust collector installed at DIP CML buffing line -1 to control fugitive emission .
- 7) Modification carried out in soaking zone by adding 4 numbers of BFG burners to reduce the HSD/LDO consumption from 350 litres/hour to 50 litres/hour in Annealing furnace-1.
- 8) New Quenching tower commissioned to reduce the coke burning loss in COP.
- 9) In Cement plant ,Kiln-2 root blower motor capacity reduced from 55KW to 37 KW.
- 10) Installed power capacitors and LED lights to improve power factor and energy efficiency.

Additional Investment and Proposals:

1. Installation of New Annealing furnace-3 for effective utilization of blast furnace gas.
2. Installation of additional turbine for effective utilization of steam generation from boiler no-4.
3. Expansion of Sewage treatment plant for further water conservation.
4. Installation of Variable frequency drives (VFD'S) for various applications like spinning machine-3,mould drive ,magnesium de dusting blower, Zinc coating, de dusting blowers and cranes in DIP to facilitate further power reduction.
5. To carry out energy audit audit in DIP to facilitate further scope for implementation of energy conservation initiatives and to improve efficiencies.
6. To carryout concreting of additional coal yard in COP to arrest further ground losses of coal/coke.

PART – I

Any other particulars for improving the quality of the environment

1. In the year 2018-19 we have planted around 2000 nos. of saplings in our plant premises to reduce the green house gas effect on environment.
2. EMPs and Kaizens system are being implemented to improve the environment on regular basis.

To Improve the work environment and to control the pollution, the management is being conducted monthly review meeting on environmental issues, conducting the environment audits & awareness classes and reviews of environmental performances on regular basis.