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Environment Auditing & Consultancy Service

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Ref. No. : 701/08/2018-19

Date : 30/08/2018

NATIONAL AMBIENT AIR QUALITY MONITORING REPORT FOR THE MONTH - AUGUST : 2018

Name of company : JINDAL SAW LIMITED
 Village: Samaghogha,
 Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 5182_2/6/10/23

Sr. No.	Particulars	Unit	Location No.1 : STP											
			1	2	3	4	5	6	7	8	9	10		
01.	No. of Week	---												
02.	Date & Time Starting of Monitoring	---	02/08/18 09.00	03/08/18 17.30	06/08/18 09.15	10/08/18 09.30	13/08/18 08.45	17/08/18 09.00	20/08/18 09.00	24/08/18 09.15	27/08/18 09.30	28/08/18 17.15		
03.	Date & Time Ending of Monitoring	---	03/08/18 09.00	04/08/18 17.30	07/07/18 09.15	11/08/18 09.30	14/08/18 08.45	18/08/18 09.00	21/08/18 09.00	25/08/18 09.15	28/08/18 09.30	29/08/18 17.15		
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00		
05.	Dominant Wind Direction (From)	---	W	W	W	WNW	W	S	S	SSE	S	S		
06.	Average Wind Speed	Km/Hr.	3.5	4.2	3.9	3.2	2.9	6.2	4.5	4.9	6	6.3		
07.	Average flow rate for Dust Monitoring PM10	m ³ /min.	1.12	1.11	1.13	1.14	1.11	1.12	1.13	1.14	1.12	1.13		
08.	Average flow rate for Dust Monitoring PM2.5	m ³ /hr.	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
09.	Average flow rate for Gas Monitoring	LPM	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
10.	Permissible limits for PM10*	µg/m ³	100	100	100	100	100	100	100	100	100	100		
11.	Measured Concentration of PM10	µg/m ³	56	54	58	55	61	63	58	52	56	59		
12.	Permissible limits for PM2.5*	µg/m ³	60	60	60	60	60	60	60	60	60	60		
13.	Measured Concentration of PM2.5	µg/m ³	30	34	40	39	38	42	38	42	36	35		
14.	Permissible limits for SO ₂ *	µg/m ³	80	80	80	80	80	80	80	80	80	80		
15.	Measured Concentration of SO ₂	µg/m ³	5.1	7.2	8.3	7.6	7.8	6.5	7.1	7.8	8.2	8.3		
16.	Permissible limits for NO ₂ *	µg/m ³	80	80	80	80	80	80	80	80	80	80		
17.	Measured Concentration of NO ₂	µg/m ³	14.2	14.6	15.5	13.9	15.2	16.9	14.2	14.9	16.7	16.9		
18.	Permissible limit for CO **	µg/m ³	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000		
19.	Measured Concentration of CO	µg/m ³	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	B.D.L.	B.D.L.

Instrument used : (1) 4 Nos. RDS (APM - 217 BL), (2) 3 Nos. of Gaseous Sampler (AAS 109) (3) 3 Nos. PM 2.5 Sampler (AAS 127)

All Calibration due on : 05/05/2019

*Permissible Limits are as per NAAQ Standard 16th November 2009.

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Ref. No. : 702/08/2018-19

Date : 30/08/2018

NATIONAL AMBIENT AIR QUALITY MONITORING REPORT FOR THE MONTH - AUGUST : 2018

Name of company : JINDAL SAW LIMITED
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 5182_2/6/10/23

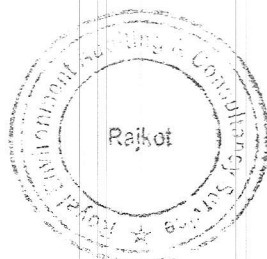
Sr. No.	Particulars	Unit	Location No.2 : Sinter plant - 1 (NNW)									
			1	2	3	4	5					
01.	No. of Week	---										
02.	Date & Time Starting of Monitoring	---	02/08/18 09.15	03/08/18 17.15	06/08/18 09.00	10/08/18 08.45	13/08/18 09.00	17/08/18 09.15	20/08/18 09.30	24/08/18 09.00	27/08/18 08.45	28/08/18 17.30
03.	Date & Time Ending of Monitoring	---	03/08/18 09.15	04/08/18 17.15	07/07/18 09.00	11/08/18 08.45	14/08/18 09.00	18/08/18 09.15	21/08/18 09.30	25/08/18 09.00	28/08/18 08.45	29/08/18 17.30
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	---	W	W	W	WNW	W	S	S	SSE	S	S
06.	Average Wind Speed	Km/Hr.	3.5	4.2	3.9	3.2	2.9	6.2	4.5	4.9	6	6.3
07.	Average flow rate for Dust Monitoring PM10	m ³ /min.	1.11	1.14	1.12	1.11	1.12	1.13	1.14	1.12	1.11	1.12
08.	Average flow rate for Dust Monitoring PM2.5	m ³ /hr.	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
09.	Average flow rate for Gas Monitoring	LPM	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
10.	Permissible limits for PM10*	µg/m ³	100	100	100	100	100	100	100	100	100	100
11.	Measured Concentration of PM10	µg/m ³	59	58	56	61	63	61	58	54	62	53
12.	Permissible limits for PM2.5*	µg/m ³	60	60	60	60	60	60	60	60	60	60
13.	Measured Concentration of PM2.5	µg/m ³	41	36	33	39	34	42	39	41	44	38
14.	Permissible limits for SO ₂ *	µg/m ³	80	80	80	80	80	80	80	80	80	80
15.	Measured Concentration of SO ₂	µg/m ³	8.5	7.9	7.1	8.3	7.5	7.8	8.2	8.1	7.9	6.3
16.	Permissible limits for NO ₂ *	µg/m ³	80	80	80	80	80	80	80	80	80	80
17.	Measured Concentration of NO ₂	µg/m ³	16.2	14.2	14.6	15.1	16.3	17.5	16.4	16.1	17.5	17.2
18.	Permissible limit for CO **	µg/m ³	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
19.	Measured Concentration of CO	µg/m ³	B.D.L.	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Instrument used : (1) 3 Nos. RDS (APM - 217 BL), (2) 3 Nos. of Gaseous Sampler (AAS 109) (3) 3 Nos. PM 2.5 Sampler (AAS 127)

All Calibration due on : 05/05/2019

*Permissible Limits are as per NAAQ Standard 16th November 2009.

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Ref. No. : 703/08/2018-19

Date : 30/08/2018

NATIONAL AMBIENT AIR QUALITY MONITORING REPORT FOR THE MONTH - AUGUST : 2018

Name of company : JINDAL SAW LIMITED
 Village: Samaghogha,
 Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 5182_2/6/10/23

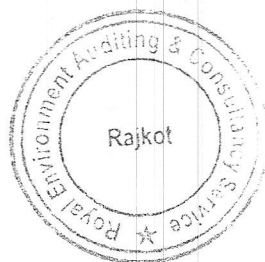
Sr. No.	Particulars	Unit	Location No.3 : Nr. Spiral-II Pipe Storage Yard (W)									
			1	2	3	4	5					
01.	No. of Week	---										
02.	Date & Time Starting of Monitoring	---	02/08/18 08.45	03/08/18 17.00	06/08/18 09.30	10/08/18 09.00	13/08/18 09.15	17/08/18 09.30	20/08/18 08.45	24/08/18 09.30	27/08/18 09.00	28/08/18 17.45
03.	Date & Time Ending of Monitoring	---	03/08/18 08.45	04/08/18 17.00	07/07/18 09.30	11/08/18 09.00	14/08/18 09.15	18/08/18 09.30	21/08/18 08.45	25/08/18 09.30	28/08/18 09.00	29/08/18 17.45
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	---	W	W	W	WNW	W	S	S	SSE	S	S
06.	Average Wind Speed	Km/Hr.	3.5	4.2	3.9	3.2	2.9	6.2	4.5	4.9	6	6.3
07.	Average flow rate for Dust Monitoring PM10	m ³ /min.	1.13	1.11	1.12	1.14	1.13	1.12	1.14	1.12	1.13	1.11
08.	Average flow rate for Dust Monitoring PM2.5	m ³ /hr.	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
09.	Average flow rate for Gas Monitoring	LPM	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
10.	Permissible limits for PM10*	µg/m ³	100	100	100	100	100	100	100	100	100	100
11.	Measured Concentration of PM10	µg/m ³	63	56	59	54	56	54	59	61	59	62
12.	Permissible limits for PM2.5*	µg/m ³	60	60	60	60	60	60	60	60	60	60
13.	Measured Concentration of PM2.5	µg/m ³	41	36	42	41	39	36	42	37	38	42
14.	Permissible limits for SO ₂ *	µg/m ³	80	80	80	80	80	80	80	80	80	80
15.	Measured Concentration of SO ₂	µg/m ³	8.4	6.4	7.3	7.4	7.7	7.6	7.9	6.7	6.9	7.9
16.	Permissible limits for NO ₂ *	µg/m ³	80	80	80	80	80	80	80	80	80	80
17.	Measured Concentration of NO ₂	µg/m ³	16.1	17.2	17.6	17.0	16.2	16.4	17.8	17.3	16.4	18.1
18.	Permissible limit for CO **	µg/m ³	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
19.	Measured Concentration of CO	µg/m ³	B.D.L.	BDL	BDL	BDL	BDL	BDL	BDL	BDL	B.D.L.	B.D.L.

Instrument used : (1) 3 Nos. RDS (APM - 217 BL), (2) 3 Nos. of Gaseous Sampler (AAS 109) (3) 3 Nos. PM 2.5 Sampler (AAS 127)

All Calibration due on : 05/05/2019

*Permissible Limits are as per NAAQ Standard 16th November 2009.

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Ref. No. : 704/08/2018-19

Date : 30/08/2018

NATIONAL AMBIENT AIR QUALITY MONITORING REPORT FOR THE MONTH - AUGUST : 2018

Name of company : JINDAL SAW LIMITED
 Village: Samaghogha,
 Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 5182_2/6/10/23

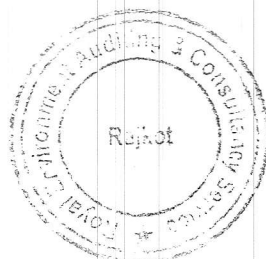
Sr. No.	Particulars	Unit	Location No.4 : Old Colony (E)									
			1	2	3	4	5					
01.	No. of Week	---										
02.	Date & Time Starting of Monitoring	---	02/08/18 09.30	03/08/18 17.45	06/08/18 08.45	10/08/18 09.15	13/08/18 09.30	17/08/18 08.45	20/08/18 09.15	24/08/18 08.45	27/08/18 09.15	28/08/18 17.00
03.	Date & Time Ending of Monitoring	---	03/08/18 09.30	04/08/18 17.45	07/07/18 08.45	11/08/18 09.15	14/08/18 09.30	18/08/18 08.45	21/08/18 09.15	25/08/18 08.45	28/08/18 09.15	29/08/18 17.00
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	---	W	W	W	WNW	W	S	S	SSE	S	S
06.	Average Wind Speed	Km/Hr.	3.5	4.2	3.9	3.2	2.9	6.2	4.5	4.9	6	6.3
07.	Average flow rate for Dust Monitoring PM10	m ³ /min.	1.12	1.11	1.13	1.14	1.12	1.14	1.13	1.14	1.13	1.12
08.	Average flow rate for Dust Monitoring PM2.5	m ³ /hr.	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
09.	Average flow rate for Gas Monitoring	LPM	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
10.	Permissible limits for PM10*	µg/m ³	100	100	100	100	100	100	100	100	100	100
11.	Measured Concentration of PM10	µg/m ³	63	61	64	58	60	55	59	62	57	66
12.	Permissible limits for PM2.5*	µg/m ³	60	60	60	60	60	60	60	60	60	60
13.	Measured Concentration of PM2.5	µg/m ³	41	39	36	38	42	39	37	43	38	40
14.	Permissible limits for SO ₂ *	µg/m ³	80	80	80	80	80	80	80	80	80	80
15.	Measured Concentration of SO ₂	µg/m ³	8.5	7.2	7.6	7.8	8.2	7.5	8.3	7.9	7.2	8.6
16.	Permissible limits for NO ₂ *	µg/m ³	80	80	80	80	80	80	80	80	80	80
17.	Measured Concentration of NO ₂	µg/m ³	16.9	15.2	16.3	15.9	17.2	18.3	17.3	17.9	18.3	18.1
18.	Permissible limit for CO **	µg/m ³	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
19.	Measured Concentration of CO	µg/m ³	B.D.L.	BDL	BDL	BDL	BDL	BDL	BDL	BDL	B.D.L.	B.D.L.

Instrument used : (1) 3 Nos. RDS (APM - 217 BL), (2) 3 Nos. of Gaseous Sampler (AAS 109) (3) 3 Nos. PM 2.5 Sampler (AAS 127)

All Calibration due on : 05/05/2019

*Permissible Limits are as per NAAQ Standard 16th November 2009.

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Ref. No. :707/08/2018-19

Date : 30/08/2018

FUGITIVE EMISSION MONITORING REPORT

Name of company : JINDAL SAW LIMITED
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 5182_Part - 2/6/10/23/22

Sr. No.	Particulars	Unit	A - 5	A - 6
01.	Location of Ambient	---	DISP "Induction Furnace Area" Area	BF-1 CAST HOUSE
02.	Date of sampling	---	08/08/2018	08/08/2018
03.	Time of sampling	---	9.30	10.00
04.	Duration of Sampling	Hr.	8.00	8.00
05.	Dominant Wind Direction (From)	---	W	W
06.	Average Wind Speed	Km/Hr.	7.2	7.2
07.	Average flow rate during sampling	m ³ /Hr.	1.0	1.0
08.	Average flow rate for Gas sampling	LPM	0.2	0.2
09.	Permissible limits for PM 10*	µg/m³	3000	3000
10.	Measured Concentration of PM 10	µg/m ³	1258	1224
11.	Permissible limits for SO₂*	µg/m³	150	150
12.	Measured Concentration of SO ₂	µg/m ³	12.5	11.8
13.	Permissible limits for NO₂*	µg/m³	120	120
14.	Measured Concentration of NO ₂	µg/m ³	16.1	15.2
15.	Permissible limit for CO **	µg/m³	2000	2000
16.	Measured Concentration of CO	µg/m ³	BDL	BDL
17.	Permissible limit for Pb*	µg/m³	2	2
18.	Measured Concentration of Pb	µg/m ³	ND	ND

Instrument used : (1) 3 Nos. RDS (APM - 217 BL), (2) 3 Nos. Gaseous Sampler (APM 109)
All Calibration due on : 05/05/2019

BDL= Below Detectable Limit
ND= Not Detectable

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Ref. No. : 717/08/18-19

Date : 30/08/2018

STACK EMISSION MONITORING RESULTS BLAST FURNACE-1 (GPCB ID:18037)

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

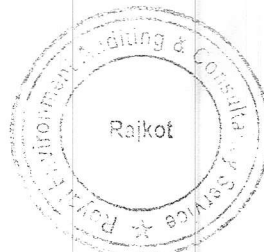
Test Method : As per IS Standards - 11255_Part - 1/2/3/7

Sr. No.	Particulars	Unit	S - 1	S - 2	S - 3	S - 5
01	Date of Sampling	---	07/08/2018	07/08/2018	07/08/2018	27/08/2018
02	Time of sampling	Hr.	10.00	11.00	12.00	15.00
03	Stack Attached to	---	Dedusting System	Boiler - I	Boiler - II	Stove Stack
04	Air Pollution Control Measures	---	Bag Filter	---	---	---
05	Stack Height	Meter	35.0	45	45	50.0
06	Stack Diameter	Meter	1.5	1.4	1.4	2.25
07	Stack Temperature	°C	34	153	155	172
08	Ambient Temperature	°C	30	30	30	30
09	Average Velocity of Flue Gases	m/sec.	8.7	5.9	5.8	7.5
10	Isokinetic flow rate for P.M. Sampling	LPM	16	18	17	21
11	Gaseous Sampling Flow Rate	LPM	2.0	2.0	2.0	2.0
12	Permissible limits for PM	mg/Nm ³	150	50	50	50
13	Measured Concentration of PM.	mg/Nm ³	7	4	5	2
14	Permissible limits for SO ₂	ppm	100	250	250	250
15	Measured Concentration of SO ₂	ppm	ND	8.1	6.4	ND
16	Permissible limits for NO _x	ppm	50	150	150	150
17	Measured Concentration of NO _x	ppm	ND	11.5	10.9	ND
18	Permissible limits for CO vol/vol	%	N.A.	1 % Max.	1 % Max.	1 % Max.
19	Measured Concentration of CO vol/vol	%	N.A.	0.2	0.2	0.1

Note : Minimum Detectable Limit of SO₂ & Nox is 0.1 and 0.01 ppm respectively.
Instrument Used : Stack Monitoring Kit - Ecotech make - ESS 100
Calibration due on : 14/09/2018

N.D=Not Detectable
N.A.=Not Applicable

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Ref. No. : 709/08/18-19

Date : 30/08/2018

Performance Evaluation of Air Pollution Control Equipments Blast Furnace Plant-1(GPCB ID:18037)

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 11255_Part - 1/3

Sr. No.	Particulars	Unit	S - 1
01	Date of Sampling	---	07-08-2018
02	Attached to	---	De-dusting System
03	Stack Height	Meter	35
04	Stack Duct Diameter	Meter	1.4
05	Stack Temperature	°C	36
06	Ambient Temperature	°C	30
07	Average Velocity of Flue Gases	m/sec.	14.0
08	IsoKinetic Flowrate for Sampling	LPM	25
09	Inlet	mg/Nm ³	859
10	Outlet	mg/Nm ³	13
11	Efficiency	%	98.49

Instrument Used : Stack Monitoring Kit - Ecotech make - ESS 100

Calibration due on 14/09/2018

Royal Environment Auditing & Consultancy Service



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Ref. No. : 728/08/2018-19

Date : 30/08/2018

AMBIENT NOISE LEVEL MEASUREMENT

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Date of sampling : 6th August, 2018

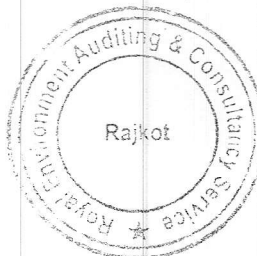
Sr. No.	Location of Sampling	Value in dB(A) Day Time			Value in dB(A) Night Time		
		Min.	Max.	Leq	Min.	Max.	Leq
01.	Admin. Building	42.9	62.8	53.7	41.4	56.2	51.9
02.	Nr. DISP	42.9	58.3	51.2	41.3	56.9	47.5
03.	Nr. LPG Yard	43.5	54.8	52.6	43.6	56.9	51.2
04.	New Colony (School)	42.4	50.2	47.6	42.3	51.4	45.5
05.	Nr. SDP-2	52.2	66.3	57.8	52.7	57.6	55.3
06.	Nr. Coating-1	56.9	65.6	62.7	51.2	59.2	55.1
07.	Nr. Coating-2	52.9	64.7	58.3	45.1	63.7	53.4
08.	Nr. Sinter Plant-1	55.8	74.3	64.4	55.8	65.9	58.7
09.	Nr. Sinter Plant-2	52.1	74.5	63.2	53.3	68.4	61.1
10.	Nr. Blast Furnace-1	57.8	65.4	61.8	51.9	67.2	60.5
11.	Nr. Spiral-2	54.2	64.5	60.3	44.9	65.3	56.2
12.	Nr. Main Gate (Security Office)	53.2	64.2	57.2	43.2	61.6	55.2

Instruments used : Sound level meter, Model : SL - 4030 (Lutron Make)

Range : A - 30 to 80 dB, B-50 to 100 dB, C-80 to 130 dB.

Recalibration is due on : 14/09/2018

Royal Environment Auditing & Consultancy Service



Hitesh
Analyst



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Ref. No. : 730/08/2018-19

Date : 30/08/2018

WORK ZONE NOISE LEVEL MEASUREMENT BLAST FURNACE- 1 (GPCB ID:18037)

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Date of sampling : 7th August, 2018

Sr. No.	Location of Sampling	Value in dB(A)		
		Min.	Max.	Leq
01.	Stock House	63.5	76.7	70.8
02.	Inside BF Control Room	49.3	57.2	53.4
03.	Near Cast House	46.9	64.2	57.1
04.	Inside Laboratory	41.2	54.8	47.9
05.	Inside Control Room of Blower House	51.2	60.4	56.8
06.	Inside Control Room of CPP	48.4	56.7	53.2

Instruments used : Sound level meter, Model : SL - 4030 (Lutron Make)

Range : A - 30 to 80 dB, B-50 to 100 dB, C-80 to 130 dB.

Recalibration is due on : 14/09/2018

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Ref. No. : 734/08/2018-19

Date : 30/08/2018

REPORT OF DOMESTIC WASTE WATER ANALYSIS

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Source of Sample Collection : Sewage Treatment Plant (Inlet & Outlet)

Date of Sampling : 16/08/2018

Test Method : As per IS Standards - 3025

Sr. No.	Parameters	Unit	GPCB limits for Treated Effluent	Treated Effluent
01.	pH	pH Unit	----	7.16
02.	BOD (3 Days at 27°C)	mg/l	<20	3
03.	Total Dissolve Solid	mg/l	...	1720
04.	COD	mg/l	...	8
05.	Total Suspended Solid	mg/l	<30	3
06.	Oil & Grease	mg/l	...	ND
07.	Fecal Coliform	MPN/100ml	1000	Absent
08.	Residual Chlorine	mg/l	Min. 0.5	0.69

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Form No. 37

(Prescribed under Rule 12-B)

Register containing particulars of monitoring of working environment required under Section 7-A (a)(e).

- 1 Name of the Department/Plant.: **BF Plant-1 at JINDAL SAW LIMITED, Samaghogha. (GPCB ID: 18037)**
- 2 Raw materials, by products and finished products involved in the process. **TOTAL DUST & CO.**
- 3 Particulars of sampling


Date of Sampling : 7th August, 2018

Sr. No	Location Operation monitored	Identified Contaminate	Sampling Instrument used	Airborne Contamination			TWA Concentration (As given in Second Schedule)	Reference Method	Number of workers exposed at the location being monitored	Remark	Signature of person taking samples	Name (in block letters)
				Number of sample	Range	Average						
1	BF Plant-1 (Cast House)	CO	Personal Respirable Dust sampler VPDS 203	02	4.2-12.1	8.2	50 (ppm)	Gravimetric	6	----		Mr. Hitesh Umletiya
		Total Dust			1.4-2.4	1.90	10					

Instruments used : Vaibhav make personal sampler, Model No. VPDS 203
 Calibration Due on. : 12/03/2019



For: Royal Environment Auditing & Consultancy Service


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Ref. No. :705/08/2018-19

Date : 30/08/2018

FUGITIVE EMISSION MONITORING REPORT

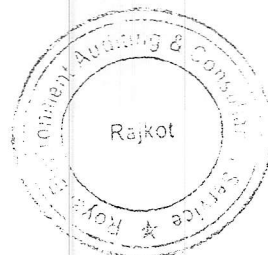
Name of company : JINDAL SAW LIMITED
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 5182 Part - 2/6/10/23/22

Sr. No.	Particulars	Unit	A - 8
01.	Location of Ambient	----	BF-2 GROUND HOPPER
02.	Date of sampling	----	09/08/2018
03.	Time of sampling	----	10.00
04.	Duration of Sampling	Hr.	8.00
05.	Dominant Wind Direction (From)	----	W
06.	Average Wind Speed	Km/Hr.	4.5
07.	Average flow rate during sampling	m ³ /Hr.	1.0
08.	Average flow rate for Gas sampling	LPM	0.2
09.	Permissible limits for PM 10*	µg/m ³	3000
10.	Measured Concentration of PM 10	µg/m ³	1602
11.	Permissible limits for SO ₂ *	µg/m ³	150
12.	Measured Concentration of SO ₂	µg/m ³	17.1
13.	Permissible limits for NO ₂ *	µg/m ³	120
14.	Measured Concentration of NO ₂	µg/m ³	19.5
15.	Permissible limit for CO **	µg/m ³	2000
16.	Measured Concentration of CO	µg/m ³	BDL
17.	Permissible limit for Pb*	µg/m ³	2
18.	Measured Concentration of Pb	µg/m ³	ND

Instrument used : (1) 3 Nos. RDS (APM - 217 BL), (2) 3 Nos. Gaseous Sampler (APM 109)
All Calibration due on : 05/05/2019

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Ref. No. :706/08/2018-19

Date : 30/08/2018

FUGITIVE EMISSION MONITORING REPORT

Name of company : JINDAL SAW LIMITED

Village: Samaghogha,

Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 5182_Part - 2/6/10/23/22

Sr. No.	Particulars	Unit	A - 2
01.	Location of Ambient	---	BF-2 RMH Stock House Transfer Point
02.	Date of sampling	---	09/08/2018
03.	Time of sampling	---	9.30
04.	Duration of Sampling	Hr.	8.00
05.	Dominant Wind Direction (From)	---	W
06.	Average Wind Speed	Km/Hr.	6.8
07.	Average flow rate during sampling	m ³ /Hr.	1.0
08.	Average flow rate for Gas sampling	LPM	0.2
09.	Permissible limits for PM 10*	µg/m ³	3000
10.	Measured Concentration of PM 10	µg/m ³	1156
11.	Permissible limits for SO ₂ *	µg/m ³	150
12.	Measured Concentration of SO ₂	µg/m ³	13.4
13.	Permissible limits for NO ₂ *	µg/m ³	120
14.	Measured Concentration of NO ₂	µg/m ³	15.2
15.	Permissible limit for CO **	µg/m ³	2000
16.	Measured Concentration of CO	µg/m ³	BDL
17.	Permissible limit for Pb*	µg/m ³	2
18.	Measured Concentration of Pb	µg/m ³	ND

Instrument used : (1) 3 Nos. RDS (APM - 217 BL), (2) 3 Nos. Gaseous Sampler (APM 109)

All Calibration due on : 05/05/2019

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Ref. No. : 718/08/18-19

Date : 30/08/2018

STACK EMISSION MONITORING RESULTS BLAST FURNACE - 2 (GPCB ID:29026)

Name of company : JINDAL SAW LIMITED,

Village: Samaghogha,

Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 11255_Part - 1/2/3/7

Sr. No.	Particulars	Unit	S - 1	S - 3
01	Date of Sampling	---	08/08/2018	14/08/2018
02	Time of sampling	Hr.	10.45	12.30
03	Stack Attached to	---	Dedusting System	Stove Stack
04	Air Pollution Control Measures	---	Bag Filter	---
05	Stack Height	Meter	40.0	65.0
06	Stack Diameter	Meter	1.5	2.250
07	Stack Temperature	°C	39	173
08	Ambient Temperature	°C	32	30
09	Average Velocity of Flue Gases	m/sec.	8.1	7.7
10	Isokinetic flow rate for P.M. Sampling	LPM	17	23
11	Gaseous Sampling Flow Rate	LPM	NA	NA
12	Permissible limits for PM	mg/Nm ³	150	150
13	Measured Concentration of PM.	mg/Nm ³	9	4
14	Permissible limits for SO ₂	mg/Nm ³	NA	NA
15	Measured Concentration of SO ₂	mg/Nm ³	---	---
16	Permissible limits for No _x	mg/Nm ³	NA	NA
17	Measured Concentration of NO _x	mg/Nm ³	---	---

Note : Minimum Detectable Limit of SO₂ & No_x is 0.1 and 0.01 ppm respectively.

Instrument Used : Stack Monitoring Kit - Ecotech make - ESS 100

Calibration due on : 14/09/2018

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Ph. +91 281 2360695 Email : royaleenvironment@live.com admin@royalconsultancy.com

Ref. No. : 714/08/18-19

Date : 30/08/2018

Performance Evaluation of Air Pollution Control Equipments Blast Furnace Plant-2 (GPCB ID:29026)

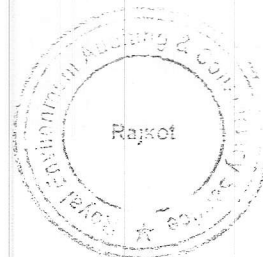
Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 11255_Part - 1/3

Sr. No.	Particulars	Unit	S - 1
01	Date of Sampling	---	08/08/2018
02	Attached to	---	Dedusting System
03	Stack Height	Meter	40
04	Stack Duct Diameter	Meter	1.5
05	Stack Temperature	°C	36
06	Ambient Temperature	°C	29
07	Average Velocity of Flue Gases	m/sec.	13.0
08	IsoKinetic Flowrate for Sampling	LPM	24
09	Inlet	mg/Nm ³	1132
10	Outlet	mg/Nm ³	14
11	Efficiency	%	98.76

Instrument Used : Stack Monitoring Kit - Ecotech make - ESS 100

Calibration due on 14/09/2018



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Ref. No. : 732/08/2018-19

Date : 30/08/2018

WORK ZONE NOISE LEVEL MEASUREMENT BLAST FURNACE - 2 (GPCB ID:29026)

Name of company : JINDAL SAW LIMITED,

Village: Samaghogha,

Tal. : Mundra, Dist. Kutch

Date of sampling : 8th August, 2018

Sr. No.	Location of Sampling	Value in dB(A)		
		Min.	Max.	Leq
01.	Inside BF Control Room	45.7	63.5	57.2
02.	Stock House	48.7	66.5	58.4
03.	Nr. Cast House	57.1	67.9	64.5
04	Near Dedusting area	47.3	66.2	57.6

Instruments used : Sound level meter, Model : SL - 4030 (Lutron Make)

Range : A - 30 to 80 dB, B-50 to 100 dB,C-80 to 130 dB.

Recalibration is due on : 14/09/2018

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Form No. 37**(Prescribed under Rule 12-B)**

Register containing particulars of monitoring of working environment required under Section 7-A (a)(e).

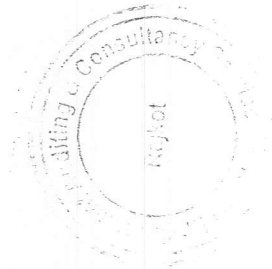
- 1 Name of the Department/Plant.: **BF Plant-2 at JINDAL SAW LIMITED, Samaghogha. (GPCB ID: 29026)**
- 2 Raw materials, by products and finished products involved in the process. **TOTAL DUST & CO.**
- 3 Particulars of sampling

Date of Sampling : 8th August, 2018

Sr. No	Location Operation monitored	Identified Contaminate	Sampling Instrument used	Airborne Contamination			TWA Concentration (As given in Second Schedule)	Reference Method	Number of workers exposed at the location being monitored	Remark	Signature of person taking samples	Name (in block letters)
				Number of sample	Range	Average						
1	BF Plant-2 (Cast House)	CO	Personal Respirable Dust sampler VPDS 203	02	4-15	10 (ppm)	50 (ppm)	Gravimetric	5	----		Mr. Hitesh Umletiya
		Total Dust			1.1-2.7	1.9	10					

Instruments used : Vaibhav make personal sampler, Model No. VPDS 203

Calibration Due on : 12/03/2019



For. Royal Environment Auditing & Consultancy Service



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Ref. No. : 715/08/17-18

Date : 30/08/2018

STACK EMISSION MONITORING RESULTS

Sinter Plant - 1(GPCB ID:35456)

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

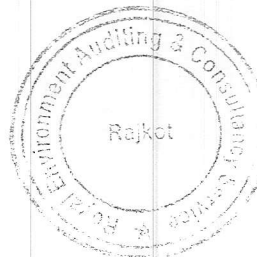
Test Method : As per IS Standards - 11255_Part - 1/2/3/7

Sr. No.	Particulars	Unit	S - 3	S - 4	S - 5	S - 6
01	Date of Sampling	---	04-08-2018	08-08-2018	04-08-2018	04-08-2018
02	Time of sampling	---	9.30	10.30	11.25	14.20
03	Stack Attached to	---	Sinter Furnace	Primary Mixture House	Secondary Mixture House	Discharge End
04	Air Pollution Control Measures	---	ESP	ESP
05	Stack Height	Meter	50	19.75	36.08	32
06	Stack Diameter	Meter	2.0	1.25	1.25	1.30
07	Stack Temperature	°C	134	34	30	126
08	Ambient Temperature	°C	29	30	29	29
09	Average Velocity of Flue Gases	m/sec.	10.4	2.9	2.3	8.6
10	Isokinetic flow rate for P.M. Sampling	LPM	15	11	9	12
11	Gaseous Sampling Flow Rate	LPM	2.0	NA	NA	NA
12	Permissible limits for PM	mg/Nm ³	150	150	150	150
13	Measured Concentration of PM	mg/Nm ³	16	15	13	18
14	Permissible limits for SO ₂	ppm	100	NA	NA	NA
15	Measured Concentration of SO ₂	ppm	6.6
16	Permissible limits for NO _x	ppm	50	NA	NA	NA
17	Measured Concentration of NO _x	ppm	15.2

Note : Minimum Detectable Limit of SO₂ & Nox is 0.1 and 0.01 ppm respectively.
Instrument Used : Stack Monitoring Kit - Ecotech make - ESS 100
Calibration due on : 14/09/2018

NA= Not Applicable
ND=Not Detectable

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Ref. No. : 708/08/18-19

Date : 30/08/2018

Performance Evaluation of Air Pollution Control Equipments Sinter Plant-1 (GPCB ID 35456)

Name of Company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

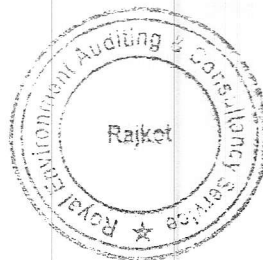
Test Method : As per IS Standards - 11255_Part - 1/3

Sr. No.	Particulars	Unit	S - 3
01	Date of Sampling	---	04-08-2018
02	Attached to	---	Sinter Furnace
03	Stack Height	Meter	50
04	Stack Diameter	Meter	2.0
05	Stack Temperature	°C	137
06	Ambient Temperature	°C	29
07	Average Velocity of Flue Gases	m/sec.	15
08	IsoKinetic Flowrate for Sampling	LPM	21
09	Inlet	mg/Nm ³	1259
10	Outlet	mg/Nm ³	16
11	Efficiency	%	98.73

Instrument Used : Stack Monitoring Kit - Ecotech make - ESS 100

Calibration due on 14/09/2018

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Ref. No. : 729/08/2018-19

Date : 30/08/2018

WORK ZONE NOISE LEVEL MEASUREMENT

SINTER PLANT- 1 (GPCB ID:35456)

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Date of sampling : 4th August, 2018

Sr. No.	Location of Sampling	Value in dB(A)		
		Min.	Max.	Leq
1	Inside Control Room	42.3	58.2	51.4
2	Inside Mechanical Room	43.2	62.8	53.7
3	Near Crusher	51.4	66.8	59.8
4	Sinter Machine area	44.5	61.3	55.7

Instruments used : Sound level meter, Model : SL - 4030 (Lutron Make)

Range : A - 30 to 80 dB, B-50 to 100 dB, C-80 to 130 dB.

Recalibration is due on : 14/09/2018

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Hitesh
Analyst


Form No. 37

(Prescribed under Rule 12-B)

Register containing particulars of monitoring of working environment required under Section 7-A (a)(e).

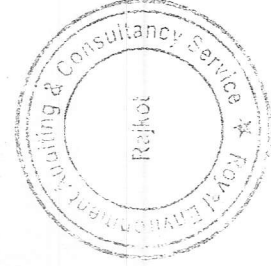
- 1 Name of the Department/Plant.: **Sinter Plant-1 at JINDAL SAW LIMITED, Samaghogha. (GPCB ID: 35456)**
- 2 Raw materials, by products and finished products involved in the process. **TOTAL DUST**
- 3 Particulars of sampling

Date of Sampling : 4th August, 2018

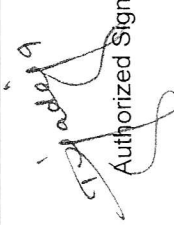
0	Location Operation monitored	Identified Contaminate	Sampling Instrument used	Airborne Contamination			TWA Concentration (As given in Second Schedule)	Reference Method	Number of workers exposed at the location being monitored	Remark	Signature of person taking samples	Name (in block letters)
				Number of sample	Range	Average						
1	Sinter Plant-1 (Sinter Machine area)	Total Dust	Personal Respirable Dust sampler VPDS 203	02	1.2-3.4	2.3	10	Gravimetric	7	----		Mr. Hitesh Umletiya

Instruments used : Vaibhav make personal sampler, Model No. VPDS 203

Calibration Due on. : 12/03/2019



For. Royal Environment Auditing & Consultancy Service



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Ref. No. : 716/08/18-19

Date : 30/08/2018

STACK EMISSION MONITORING RESULTS

Sinter Plant -2 (GPCB ID:29017)

Name of company : JINDAL SAW LIMITED,

Village: Samaghogha,

Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 11255_Part - 1/2/3/7

Sr. No.	Particulars	Unit	S - 1	S - 7	S - 9
01	Date of Sampling	---	08-08-2018	03-08-2018	03-08-2018
02	Time of sampling	Hr.	9.45	12.25	15.45
03	Stack Attached to	---	Secondary Mixer House	Sinter Furnace	Discharging End of sinter de-dusting system
04	Air Pollution Control Measures	---	Dust Collector	ESP	ESP
05	Stack Height	Meter	30	50	50
06	Stack Diameter	Meter	0.7	2	1.3
07	Stack Temperature	°C	36	136	122
08	Ambient Temperature	°C	30	30	30
09	Average Velocity of Flue Gases	m/sec.	2.19	11.8	11.4
10	Isokinetic flow rate for P.M. Sampling	LPM	10	17	17
11	Gaseous Sampling Flow Rate	LPM	NA	2.0	NA
12	Permissible limits for PM	mg/Nm ³	150	150	150
13	Measured Concentration of PM	mg/Nm ³	10	13	12
14	Permissible limits for SO ₂	ppm	NA	100	NA
15	Measured Concentration of SO ₂	ppm	---	7.8	---
16	Permissible limits for NO _x	ppm	NA	50	NA
17	Measured Concentration of NO _x	ppm	---	17.2	---

Note : Minimum Detectable Limit of SO₂ & Nox is 0.1 and 0.01 ppm respectively.

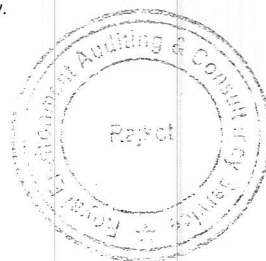
Instrument Used : Stack Monitoring Kit - Ecotech make - ESS 100

Calibration due on : 14/09/2018

NA= Not Applicable

ND= Not Detectable

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Ref. No. : 710/08/18-19

Date : 30/08/2018

Performance Evaluation of Air Pollution Control Equipments Sinter Plant-2 (GPCB ID:29017)

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

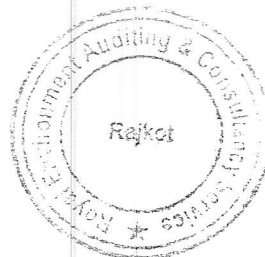
Test Method : As per IS Standards - 11255_Part - 1/3

Sr. No.	Particulars	Unit	S-15	S - 7
01	Date of Sampling	---	03-08-2018	03-08-2018
02	Attached to	---	Discharging End of Sinter de-dusting system	Sinter Furnace
03	Stack Height	Meter	50	50
04	Stack Diameter	Meter	1.3	2.0
05	Stack Temperature	°C	129	143
06	Ambient Temperature	°C	30	30
07	Average Velocity of Flue Gases	m/sec.	18.73	17.4
08	IsoKinetic Flowrate for Sampling	LPM	27	24
09	Inlet	mg/Nm ³	195	1425
10	Outlet	mg/Nm ³	12	13
11	Efficiency	%	93.85	99.09

Instrument Used : Stack Monitoring Kit - Ecotech make - ESS 100

Calibration due on 14/09/2018

Royal Environment Auditing & Consultancy Service



Netesh
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Ref. No. : 733/08/2018-19

Date : 30/08/2018

WORK ZONE NOISE LEVEL MEASUREMENT

SINTER PLANT - 2 (29017)

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Date of sampling : 3rd August, 2018

Sr. No.	Location of Sampling	Value in dB(A)		
		Min.	Max.	Leq
01.	Inside Control Room	43.8	63.7	55.3
02.	Sinter Machine area	47.5	65.2	55.9
03.	Near Proportioning Building	52.1	69.5	61.7
04.	Near Crusher House	58.9	73.6	65.4

Instruments used : Sound level meter, Model : SL - 4030 (Lutron Make)

Range : A - 30 to 80 dB, B-50 to 100 dB,C-80 to 130 dB.

Recalibration is due on : 14/09/2018

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Form No. 37

(Prescribed under Rule 12-B)

Register containing particulars of monitoring of working environment required under Section 7-A (a)(e).

- 1 Name of the Department/Plant.: **Sinter Plant-2 at JINDAL SAW LIMITED, Samaghogha. (GPCB ID:29017)**
- 2 Raw materials, by products and finished products involved in the process. **TOTAL DUST**
- 3 Particulars of sampling

Date of Sampling : 3rd August, 2018


Sr. No	Location Operation monitored	Identified Contaminate	Sampling Instrument used	Airborne Contamination			TWA concentration (As given in Second Schedule)	Reference Method	Number of workers exposed at the location being monitored	Remarks	Signature of person taking samples	Name (in block letters)
				Number of sample	Range	Average						
1	Sinter Plant-2 (Sinter Machine area)	Total Dust	Personal Respirable Dust sampler VPDS 203	02	1.3-2.9	2.10	10	Gravimetric	6	----		Mr. Hitesh Umletiya

Instruments used : Vaibhav make personal sampler, Model No. VPDS 203

Calibration Due on. : 12/03/2019



For. Royal Environment Auditing & Consultancy Service


Authorized Sign



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Environment Auditing & Consultancy Service

303-304, Shivalik-7, B/s Bal Adalat, Gondal Road, RAJKOT - 360 002.
Ph. +91 281 2360695 Email : royalservice@live.com admin@royalconsultancy.com

Ref. No. : 720/08/2018-19

Date : 30/08/2018

STACK EMISSION MONITORING RESULTS Pipe Plant (GPCB ID:18036)

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 11255_1/2/3/7

Sr. No.	Particulars	Unit	S - 1	S - 2	S - 3	S - 4	S - 12	S - 18
01	Date of Sampling	---	14/08/2018	14/08/2018	14/08/2018	16/08/2018	22/08/2018	22/08/2018
02	Time of sampling	Hr.	9.30	10.15	11.10	9.30	10.30	10.45
03	Stack Attached to	---	Core Shop-I	Core Shop-II	Core Shop-III	Core Shop-IV	Core Cleaning & Dusting-I	Core Cleaning & Dusting-II
04	Air Pollution Control Measures	---	---	---	---	---	Bag Filter	Bag Filter
05	Stack Height	Meter	30	30	30	30	30	30
06	Stack Diameter	Meter	0.584	0.58	0.584	0.584	0.6	0.6
07	Stack Temperature	°C	33	35	48	44	37	35
08	Ambient Temperature	°C	29	29	29	30	30	30
09	Average Velocity of Flue Gases	m/sec.	2.1	2.3	2.6	2.3	8.2	6.7
10	Isokinetic flow rate for P.M. Sampling	LPM	9	10	10	9	15	28
11	Gaseous Sampling Flow Rate	LPM	2.0	2.0	2.0	2.0	2.0	2.0
12	Permissible limits for PM	mg/Nm ³	150	150	150	150	150	150
13	Measured Concentration of PM	mg/Nm ³	6	8	9	7	11	9
14	Permissible limits for SO ₂	mg/Nm ³	40	40	40	40	40	40
15	Measured Concentration of SO ₂	mg/Nm ³	4.2	4.5	4.3	4.2	ND	ND
16	Permissible limits for NO _x	mg/Nm ³	25	25	25	25	25	25
17	Measured Concentration of NO _x	mg/Nm ³	5.1	4.7	5.8	5.6	4.4	5.3

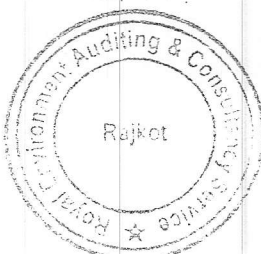
Note : Minimum Detectable Limit of SO₂ & Nox is 0.1 and 0.01 ppm respectively.

ND= Not Detectable

Instrument Used : Stack Monitoring Kit - Ecotech make - ESS 100

Calibration due on : 14/09/2018

Royal Environment Auditing & Consultancy Service



Analyst



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Ref. No. : 719/08/2018-19

Date : 30/08/2018

STACK EMISSION MONITORING RESULTS

Pipe Plant (GPCB ID:18036)

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

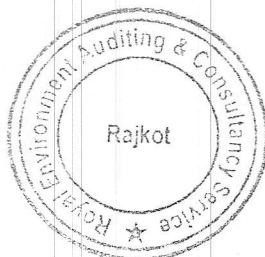
Test Method : As per IS Standards - 11255_1/2/3/7

Sr. No.	Particulars	Unit	S - 8	S - 9	S - 15	S - 20	S - 22	S - 23
01	Date of Sampling	---	13/08/2018	23/08/2018	23/08/2018	24/08/2018	09/08/2018	24/08/2018
02	Time of sampling	Hr.	9.30	9.45	15.10	9.45	10.25	15.23
03	Stack Attached to	---	Common stack Mg Converter- I&II	Zn Coating - I	Zn Coating - II	Zn Coating - III	Mg Converter -III	Zn Coating - IV & V
04	Air Pollution Control Measures	---	Bag Filter	Cyclone Seprater & Bag Filter	Cyclone Seprater & Bag Filter	Cyclone Separator & Bag Filter	Bag Filter	Cyclone Separator & Bag Filter
05	Stack Height	Meter	30	30	30	30	30	30
06	Stack Diameter	Meter	0.5	0.6	0.6	0.6	0.5	0.9
07	Stack Temperature	°C	53	32	36	34	44	43
08	Ambient Temperature	°C	30	29	29	29	30	30
09	Average Velocity of Flue Gases	m/sec.	10.14	6.1	6.0	8.6	6.8	8.48
10	Isokinetic flow rate for P.M. Sampling	LPM	18	26	24	16	28	15
11	Gaseous Sampling Flow Rate	LPM	2.0	---	---	---	---	---
12	Permissible limits for PM	mg/Nm ³	150	20 (Zn)	20 (Zn)	20 (Zn)	150	20 (Zn)
13	Measured Concentration of PM	mg/Nm ³	11	9	10(Zn)	8 (Zn)	9	12 (Zn)
14	Permissible limits for SO ₂	mg/Nm ³	40	NA	NA	NA	40	NA
15	Measured Concentration of SO ₂	mg/Nm ³	ND	---	---	---	ND	---
16	Permissible limits for NO _x	mg/Nm ³	25	NA	NA	NA	25	NA
17	Measured Concentration of NO _x	mg/Nm ³	4.3	---	---	---	4.7	---

Note : Minimum Detectable Limit of SO₂ & Nox is 0.1 and 0.01 ppm respectively.
Instrument Used : Stack Monitoring Kit - Ecotech make - ESS 100
Calibration due on : 14/09/2018

NA=Not Applicable
ND=Not Detectable

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Analyst



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Ref. No. : 721/08/2018-19

Date : 30/08/2018

STACK EMISSION MONITORING RESULTS Pipe Plant (GPCB ID:18036)

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 11255_1/2/3/7

Sr. No.	Particulars	Unit	S - 7	S - 13
01	Date of Sampling	---	16/08/2018	22/08/2018
02	Time of sampling	Hr.	16.30	11.00
03	Stack Attached to	---	Sand Reclamation	Annealing Furnace
04	Air Pollution Control Measures	---	Bag Filter	---
05	Stack Height	Meter	30	32
06	Stack Diameter	Meter	0.9	1.375
07	Stack Temperature	°C	93	156
08	Ambient Temperature	°C	30	30
09	Average Velocity of Flue Gases	m/sec.	8.06	5.2
10	Isokinetic flow rate for P.M. Sampling	LPM	28	15
11	Gaseous Sampling Flow Rate	LPM	2.0	2.0
12	Permissible limits for PM	mg/Nm ³	150	150
13	Measured Concentration of PM	mg/Nm ³	18	7
14	Permissible limits for SO ₂	mg/Nm ³	40	100 (PPM)
15	Measured Concentration of SO ₂	mg/Nm ³	5.2	1.8
16	Permissible limits for NO _x	mg/Nm ³	25	50 (PPM)
17	Measured Concentration of NO _x	mg/Nm ³	11.3	9.1 (PPM)

Note : Minimum Detectable Limit of SO₂ & No_x is 0.1 and 0.01 ppm respectively.

Instrument Used : Stack Monitoring Kit - Ecotech make - ESS 100

Calibration due on : 14/09/2018

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Ref. No. : 722/08/2018-19

Date : 30/08/2018

STACK EMISSION MONITORING RESULTS

Pipe Plant (SDP-2) (GPCB ID:18036)

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 11255_1/2/3/7

Sr. No.	Particulars	Unit	S - 1	S - 2	S - 4	S - 5	S - 6	S - 8
01	Date of Sampling	—	13/08/2018	20/08/2018	20/08/2018	17/08/2018	20/08/2018	10/08/2018
02	Time of sampling	Hr.	9.50	9.3	15.30	10.25	10.30	16.30
03	Stack Attached to	—	Magnesium Treatment	Socket Cleaning	Annealing Furnace	Zinc Coating	Tri- Grinding Section	Zinc Coating Machine (FL-7)
04	Air Pollution Control Measures	—	Bag Filter	Bag Filter	—	Bag Filter	Bag Filter	Cyclone Separator & Bag Filter
05	Stack Height	Meter	30	30	45	30	30	30
06	Stack Diameter	Meter	1.00	0.50	0.85	1.00	1.00	1.20
07	Stack Temperature	°C	43	34	92	32	37	32
08	Ambient Temperature	°C	30	30	30	30	30	29
09	Average Velocity of Flue Gases	m/sec	7.2	4.6	4.2	4.6	3.77	4.2
10	Isokinetic flow rate for PM Sampling	LPM	28	20	17	20	16	18
11	Gaseous Sampling Flow Rate	LPM	—	—	—	—	—	—
12	Permissible limits for PM	mg/Nm ³	50	50	150	50	50	50
13	Measured Concentration of PM	mg/Nm ³	11	15	6	8 (Zn)	12	11 (Zn)
14	Permissible limits for SO ₂	PPM	NA	NA	100 (PPM)	NA	NA	NA
15	Measured Concentration of SO ₂	PPM	—	—	1.4	—	—	—
16	Permissible limits for NO _x	PPM	NA	NA	50 (PPM)	NA	NA	NA
17	Measured Concentration of NO _x	PPM	—	—	7.9 (PPM)	—	—	—

Note : Minimum Detectable Limit of SO₂ & Nox is 0.1 and 0.01 ppm respectively.

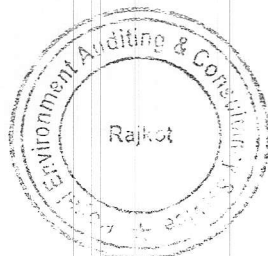
Instrument Used : Stack Monitoring Kit - Ecotech make - ESS 100

Calibration due on : 14/09/2018

ND= Not Detectable

N.A= Not Applicable

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Ref. No. : 711/08/18-19

Date : 30/08/2018

Performance Evaluation of Air Pollution Control Equipments

Pipe Plant (GPCB ID:18036)

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 11255_Part - 1/3

Sr. No.	Particulars	Unit	S - 8	S - 22
01	Date of Sampling	---	13/08/2018	09/08/2018
02	Attached to	---	Common stack Mg Converter - I & II	Mg Converter - III
03	Stack Height	Meter	30	30
04	Stack Diameter	Meter	0.5	0.5
05	Stack Temperature	°C	57	51
06	Ambient Temperature	°C	30	30
07	Average Velocity of Flue Gases	m/sec.	8.47	8.08
08	IsoKinetic Flowrate for Sampling	LPM	15	16
09	Inlet	mg/Nm ³	826	871
10	Outlet	mg/Nm ³	11	9
11	Efficiency	%	98.67	98.97

Instrument Used : Stack Monitoring Kit - Ecotech make - ESS 100
Calibration due on 14/09/2018

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H. H. H. H.
Analyst



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Ref. No. : 712/08/18-19

Date : 30/08/2018

Performance Evaluation of Air Pollution Control Equipments Pipe Plant (GPCB ID:18036)

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 11255_Part - 1/3

Sr. No.	Particulars	Unit	S - 15	S - 20	S - 23
01	Date of Sampling	--	23/08/2018	24/08/2018	24/08/2018
02	Attached to	--	Zinc Coating - II	Zinc Coating - III	Zinc Coating -IV & V
03	Stack Height	Meter	30	30	30
04	Stack Duct Diameter	Meter	0.6	0.6	0.9
05	Stack Temperature	°C	38	37	45
06	Ambient Temperature	°C	29	29	30
07	Average Velocity of Flue Gases	m/sec.	9.8	13.8	11.8
08	IsoKinetic Flowrate for Sampling	LPM	18	22	21
09	Inlet	mg/Nm ³	428	4546	1028
10	Outlet	mg/Nm ³	10	8	12
11	Efficiency	%	97.66	99.82	98.83

Instrument Used : Stack Monitoring Kit - Ecotech make - ESS 100

Calibration due on 14/09/2018



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Ref. No. : 713/08/18-19

Date : 30/08/2018

Performance Evaluation of Air Pollution Control Equipments Pipe Plant (SDP-2) (GPCB ID:18036)

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 11255_Part - 1/3

Sr. No.	Particulars	Unit	S - 1	S - 5	S-8
01	Date of Sampling	---	13/08/2018	17/08/2018	10/08/2018
02	Attached to	---	Mg Treatment	Zinc Coating	Zinc Coating machine(FL-7)
03	Stack Height	Meter	30	30	30
04	Stack Duct Diameter	Meter	1.00	1.00	0.8
05	Stack Temperature	°C	38	36	48
06	Ambient Temperature	°C	29	29	29
07	Average Velocity of Flue Gases	m/sec.	9.1	8.6	9.12
08	IsoKinetic Flowrate for Sampling	LPM	17	16	17
09	Inlet	mg/Nm ³	1028	382	432
10	Outlet	mg/Nm ³	11	8	11
11	Efficiency	%	98.93	97.91	97.45

Instrument Used : Stack Monitoring Kit - Ecotech make - ESS 100
Calibration due on 14/09/2018

Royal Environment Auditing & Consultancy Service



Hitesh
Analyst



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Ref. No. : 731/08/2018-19

Date : 30/08/2018

WORK ZONE NOISE LEVEL MEASUREMENT PIPE PLANT (GPCB ID:18036)

Name of company : JINDAL SAW LIMITED,

Village: Samaghogha,

Tal. : Mundra, Dist. Kutch

Date of sampling : 6th, 13th ,& 17th August, 2018

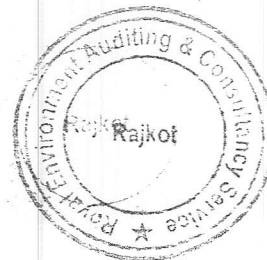
Sr. No.	Location of Sampling	Value in dB(A)		
		Min.	Max.	Leq
01.	Inside Control Room of Annealing Furnace of DISP	43.2	57.3	51.4
02	Inside Control Room – Mill Area of Spiral Plant	54.7	63.9	61.2
03	Nr. Pipe Cutting Area of Spiral Plant	60.2	78.4	68.5
04	Inside JCO Plant (End Facer Area)	63.8	67.2	66.3
01.	Nr. Induction Furnace area of DISP Plant	52.8	71.2	61.9
06	Nr. Induction Furnace of SDP-2	56.8	71.5	63.5
07	Inside Control Room of Annealing Furnace of SDP-2	72.4	81.7	77.6
08	Nr. Zinc Coating of FL-7	63.5	77.2	72.8
09	Nr. Shot Blasting area of Coating Plant- 1	70.6	79.2	76.4
10	Near Mould Shop	62.8	76.3	73.4

Instruments used : Sound level meter, Model : SL - 4030 (Lutron Make)

Range : A - 30 to 80 dB, B-50 to 100 dB, C-80 to 130 dB.

Recalibration is due on : 14/09/2018

Royal Environment Auditing & Consultancy Service



Hitesh
Analyst



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Ref. No. : 735/08/2018-19

Date : 30/08/2018

WATER & WASTE WATER QUALITY ANALYSIS REPORT

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Source of Sample : Effluent Treatment Plant

Date of Sampling : 16/08/2018

Sr. No.	Parameters	Unit	Permissible limit	Results
01.	pH	...	6.5 to 8.5	7.78
02.	Colour	pt.co.units	100	16
03.	Temperature	°C	40	34
04.	Total suspended solids	mg/l	100	12
05.	Total dissolve solids	mg/l	2100	1386
06.	Phenolic compounds	mg/l	1	ND
07.	Oil & Grease	mg/l	10	ND
08.	Chlorides	mg/l	600	331
09.	Sulphate	mg/l	1000	208
10.	Ammonical nitrogen (as NH ₃ -N)	mg/l	50	5.6
11.	BOD (3 Days at 27°C)	mg/l	30	10.3
12.	COD	mg/l	100	44.0

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Analyst


H. Test

Form No. 37 (Prescribed under Rule 12-B)

Register containing particulars of monitoring of working environment required under Section 7-A (a)(e).

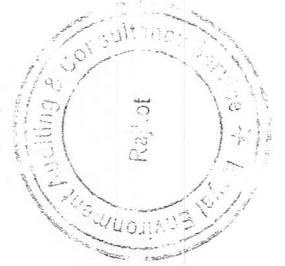
- 1 Name of the Department/Plant : DISP, JCO & Coating Units at JINDAL SAW LIMITED, Samaghogha. (GPCB ID: 18036)
- 2 Raw materials, by products and finished products involved in the process. TOTAL DUST
- 3 Particulars of sampling

Date of Sampling : 6th, 13th & 17th August, 2018


Sr. No	Location Operation monitored	Identified Contaminate	Sampling Instrument used	Airborne Contamination			TWA Concentration (As given in Second Schedule)	Reference Method	Number of workers exposed at the location being monitored	Remark	Signature of person taking samples	Name (in block letters)
				Number of sample	Range	Average						
1	Spiral Plant-2 (Nr. ID/OD)	Total Dust	Personal Respirable Dust sampler VPDS 203	02	1.3-2.7	2.0	10	Gravimetric	5	----		Mr. Hitesh Umleti
	DISP Plant (CCM Area)	Total Dust		02	1.1-3.5	2.3	10	Gravimetric	8	----		
3	Coating Plant-1 (Shot Blasting)	Total Dust	Personal Respirable Dust sampler VPDS 203	02	1.6-3.6	2.6	10	Gravimetric	6	----		
	SDP-2 (CCM Area)	Total Dust		02	1.2-3.8	2.5	10	Gravimetric	7	----		

Instruments used : Vaibhav make personal sampler, Model No. VPDS 203

Calibration Due on : 12/03/2019



For: Royal Environment Auditing & Consultancy Service


 Authorized Sign