



# Royal

## Environment Auditing & Consultancy Service

303-304, Shivalik-7, B/s. Bal Adalat, Gondal Road, RAJKOT - 360 002.

Ph.: +91 281 2360695 ■ E-mail : royaleenvironment@live.com ■ admin@royalconsultancy.com

Ref. No. : 235/07/2017-18

Date : 04/08/2017

### NATIONAL AMBIENT AIR QUALITY MONITORING REPORT FOR THE MONTH - JULY : 2017

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 : Weigh Bridge (Nr.Gate No-2) (E)							
			01		02		03		04	
01.	No. of Week	----								
02.	Date & Time Starting of Monitoring	----	04/07/17 08.45	06/07/17 09.10	11/07/17 09.25	14/07/17 09.10	18/07/17 08.40	22/07/17 08.55	25/07/17 09.20	28/07/17 09.25
03.	Date & Time Ending of Monitoring	----	05/07/17 08.45	07/07/17 09.10	12/07/17 09.25	15/07/17 09.10	19/07/17 08.40	23/07/17 08.55	26/07/17 09.20	29/07/17 09.25
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	----	W	WSW	W	WW	WNW	W	WSW	W
06.	Average Wind Speed	Km/Hr.	14.1	12.1	8.3	10.2	6.6	5.5	12.1	8.4
07.	Average flow rate for Dust Monitoring PM <sub>10</sub>	m <sup>3</sup> /min.	1.11	1.14	1.11	1.14	1.10	1.11	1.13	1.14
08.	Average flow rate for Dust Monitoring PM <sub>2.5</sub>	m <sup>3</sup> /hr.	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
10.	Permissible limits for PM <sub>10</sub> *	µg/m <sup>3</sup>	100	100	100	100	100	100	100	100
11.	Measured Concentration of PM <sub>10</sub>	µg/m <sup>3</sup>	56	52	48	45	39	36	49	43
12.	Permissible limits for PM <sub>2.5</sub> *	µg/m <sup>3</sup>	60	60	60	60	60	60	60	60
13.	Measured Concentration of PM <sub>2.5</sub>	µg/m <sup>3</sup>	26	25	29	27	23	22	27	22
14.	Permissible limits for SO <sub>2</sub> *	µg/m <sup>3</sup>	80	80	80	80	80	80	80	80
15.	Measured Concentration of SO <sub>2</sub>	µg/m <sup>3</sup>	7.3	7.1	8.4	7.5	7.9	8.8	8.2	7.9
16.	Permissible limits for NO <sub>2</sub> *	µg/m <sup>3</sup>	80	80	80	80	80	80	80	80
17.	Measured Concentration of NO <sub>2</sub>	µg/m <sup>3</sup>	15.8	16.3	17.1	15.6	17.4	14.6	14.9	15.2
18.	Permissible limit for CO **	µg/m <sup>3</sup>	2000	2000	2000	2000	2000	2000	2000	2000
19.	Measured Concentration of CO	µg/m <sup>3</sup>	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	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 : 05/05/2018

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





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Ref. No. : 236/07/2017-18

Date : 04/08/2017

### NATIONAL AMBIENT AIR QUALITY MONITORING REPORT FOR THE MONTH - JULY : 2017

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)							
			01		02		03		04	
01.	No. of Week	----								
02.	Date & Time Starting of Monitoring	----	04/07/17 09.00	06/07/17 09.00	11/07/17 09.25	14/07/17 09.00	18/07/17 08.45	22/07/17 09.00	25/07/17 09.15	28/07/17 09.25
03.	Date & Time Ending of Monitoring	----	05/07/17 09.00	07/07/17 09.00	12/07/17 09.25	15/07/17 09.00	19/07/17 08.45	23/07/17 09.00	26/07/17 09.15	29/07/17 09.25
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	----	W	WSW	W	WW	WNW	W	WSW	W
06.	Average Wind Speed	Km/Hr.	14.1	12.1	8.3	10.2	6.6	5.5	12.1	8.4
07.	Average flow rate for Dust Monitoring PM <sub>10</sub>	m <sup>3</sup> /min.	1.13	1.11	1.12	1.11	1.15	1.10	1.16	1.20
08.	Average flow rate for Dust Monitoring PM <sub>2.5</sub>	m <sup>3</sup> /hr.	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
10.	Permissible limits for PM <sub>10</sub> *	µg/m <sup>3</sup>	100	100	100	100	100	100	100	100
11.	Measured Concentration of PM <sub>10</sub>	µg/m <sup>3</sup>	56	54	49	46	43	46	44	51
12.	Permissible limits for PM <sub>2.5</sub> *	µg/m <sup>3</sup>	60	60	60	60	60	60	60	60
13.	Measured Concentration of PM <sub>2.5</sub>	µg/m <sup>3</sup>	33	35	29	31	24	28	27	31
14.	Permissible limits for SO <sub>2</sub> *	µg/m <sup>3</sup>	80	80	80	80	80	80	80	80
15.	Measured Concentration of SO <sub>2</sub>	µg/m <sup>3</sup>	8.6	8.4	7.9	7.3	6.9	6.7	7.5	6.6
16.	Permissible limits for NO <sub>2</sub> *	µg/m <sup>3</sup>	80	80	80	80	80	80	80	80
17.	Measured Concentration of NO <sub>2</sub>	µg/m <sup>3</sup>	15.3	15.9	16.1	17.6	17.9	17.6	16.2	17.1
18.	Permissible limit for CO **	µg/m <sup>3</sup>	2000	2000	2000	2000	2000	2000	2000	2000
19.	Measured Concentration of CO	µg/m <sup>3</sup>	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	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 : 05/05/2018

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Ref. No. : 237/07/2017-18

DATE: 04/08/2017

### NATIONAL AMBIENT AIR QUALITY MONITORING REPORT FOR THE MONTH - JULY : 2017

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. Work Shop Spiral-II (W)							
			01		02		03		04	
01.	No. of Week	----								
02.	Date & Time Starting of Monitoring	----	04/07/17 09.15	06/07/17 09.15	11/07/17 09.30	14/07/17 09.15	18/07/17 09.00	22/07/17 09.15	25/07/17 09.25	28/07/17 09.30
03.	Date & Time Ending of Monitoring	----	05/07/17 09.15	07/07/17 09.15	12/07/17 09.30	15/07/17 09.15	19/07/17 09.00	23/07/17 09.15	26/07/17 09.25	29/07/17 09.30
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	----	W	WSW	W	WW	WNW	W	WSW	W
06.	Average Wind Speed	Km/Hr.	14.1	12.1	8.3	10.2	6.6	5.5	12.1	8.4
07.	Average flow rate for Dust Monitoring PM <sub>10</sub>	m <sup>3</sup> /min.	1.12	1.13	1.15	1.14	1.15	1.10	1.11	1.12
08.	Average flow rate for Dust Monitoring PM <sub>2.5</sub>	m <sup>3</sup> /hr.	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
10.	Permissible limits for PM <sub>10</sub> *	µg/m <sup>3</sup>	100	100	100	100	100	100	100	100
11.	Measured Concentration of PM <sub>10</sub>	µg/m <sup>3</sup>	52	56	54	59	41	40	45	41
12.	Permissible limits for PM <sub>2.5</sub> *	µg/m <sup>3</sup>	60	60	60	60	60	60	60	60
13.	Measured Concentration of PM <sub>2.5</sub>	µg/m <sup>3</sup>	26	27	31	25	21	28	29	21
14.	Permissible limits for SO <sub>2</sub> *	µg/m <sup>3</sup>	80	80	80	80	80	80	80	80
15.	Measured Concentration of SO <sub>2</sub>	µg/m <sup>3</sup>	8.4	8.3	7.5	6.6	6.4	7.5	7.8	8.0
16.	Permissible limits for NO <sub>2</sub> *	µg/m <sup>3</sup>	80	80	80	80	80	80	80	80
17.	Measured Concentration of NO <sub>2</sub>	µg/m <sup>3</sup>	17.9	18.1	17.4	17.6	16.9	17.4	15.5	17.1
18.	Permissible limit for CO **	µg/m <sup>3</sup>	2000	2000	2000	2000	2000	2000	2000	2000
19.	Measured Concentration of CO	µg/m <sup>3</sup>	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	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)

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DATE: 04/08/2017

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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 : MAIN GATE (E)							
			01		02		03		04	
01.	No. of Week	----								
02.	Date & Time Starting of Monitoring	----	04/07/17 09.15	06/07/17 09.15	11/07/17 09.30	14/07/17 09.15	18/07/17 09.00	22/07/17 09.15	25/07/17 09.25	28/07/17 09.30
03.	Date & Time Ending of Monitoring	----	05/07/17 09.15	07/07/17 09.15	12/07/17 09.30	15/07/17 09.15	19/07/17 09.00	23/07/17 09.15	26/07/17 09.25	29/07/17 09.30
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	----	W	WSW	W	WW	WNW	W	WSW	W
06.	Average Wind Speed	Km/Hr.	14.1	12.1	8.3	10.2	6.6	5.5	12.1	8.4
07.	Average flow rate for Dust Monitoring PM <sub>10</sub>	m <sup>3</sup> /min.	1.11	1.13	1.13	1.12	1.14	1.15	1.10	1.13
08.	Average flow rate for Dust Monitoring PM <sub>2.5</sub>	m <sup>3</sup> /hr.	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
10.	Permissible limits for PM <sub>10</sub> *	µg/m <sup>3</sup>	100	100	100	100	100	100	100	100
11.	Measured Concentration of PM <sub>10</sub>	µg/m <sup>3</sup>	49	51	53	47	41	44	43	45
12.	Permissible limits for PM <sub>2.5</sub> *	µg/m <sup>3</sup>	60	60	60	60	60	60	60	60
13.	Measured Concentration of PM <sub>2.5</sub>	µg/m <sup>3</sup>	26	28	23	27	22	21	31	33
14.	Permissible limits for SO <sub>2</sub> *	µg/m <sup>3</sup>	80	80	80	80	80	80	80	80
15.	Measured Concentration of SO <sub>2</sub>	µg/m <sup>3</sup>	8.9	9.1	7.6	7.5	8.1	7.1	6.5	7.4
16.	Permissible limits for NO <sub>2</sub> *	µg/m <sup>3</sup>	80	80	80	80	80	80	80	80
17.	Measured Concentration of NO <sub>2</sub>	µg/m <sup>3</sup>	16.2	16.5	15.5	14.1	14.9	12.9	14.5	15.5
18.	Permissible limit for CO **	µg/m <sup>3</sup>	2000	2000	2000	2000	2000	2000	2000	2000
19.	Measured Concentration of CO	µg/m <sup>3</sup>	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	B.D.L.	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 : 05/05/2018

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Ref. No. :239/07/2017-18

DATE: 04/08/2017

### 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 - 1	A - 2	A - 3
01.	Location of Ambient	----	BF-1 RMH Stock House	BF-2 RMH Stock House	Sinter RMH Yard
02.	Date of sampling	----	10/07/2017	13/07/2017	08/07/2017
03.	Time of sampling	----	10.00	9.00	9.30
04.	Duration of Sampling	Hr.	8.00	8.00	8.00
05.	Dominant Wind Direction (From)	----	W	W	WSW
06.	Average Wind Speed	Km/Hr.	8.1	9.8	9.3
07.	Average flow rate during sampling	m <sup>3</sup> /Hr.	1.0	1.0	1.0
08.	Average flow rate for Gas sampling	LPM	0.2	0.2	0.2
09.	Permissible limits for PM 10*	µg/m <sup>3</sup>	3000	3000	3000
10.	Measured Concentration of PM 10	µg/m <sup>3</sup>	1146	1238	1352
11.	Permissible limits for SO <sub>2</sub> *	µg/m <sup>3</sup>	150	150	150
12.	Measured Concentration of SO <sub>2</sub>	µg/m <sup>3</sup>	12.1	12.4	13.9
13.	Permissible limits for NO <sub>2</sub> *	µg/m <sup>3</sup>	120	120	120
14.	Measured Concentration of NO <sub>2</sub>	µg/m <sup>3</sup>	20.6	21.1	19.7
15.	Permissible limit for CO **	µg/m <sup>3</sup>	2000	2000	2000
16.	Measured Concentration of CO	µg/m <sup>3</sup>	BDL	BDL	BDL
17.	Permissible limit for Pb*	µg/m <sup>3</sup>	2	2	2
18.	Measured Concentration of Pb	µg/m <sup>3</sup>	ND	ND	ND

Instrument used : (1) 3 Nos. RDS (APM - 217 BL), (2) 3 Nos. Gaseous Sampler (APM 109)  
All Calibration due on : 05/05/2018

BDL= Below Detectable Limit  
ND= Not Detectable

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Sandip  
Analyst



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Ref. No. :239/07/2017-18

DATE: 04/08/2017

### 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 - 4	A - 5	A - 6
01.	Location of Ambient	----	Sinter 2 Ground Hopper	DISP "CCM" Area	BF CAST HOUSE
02.	Date of sampling	----	08/07/2017	13/07/2017	10/07/2017
03.	Time of sampling	----	9.45	9.15	9.45
04.	Duration of Sampling	Hr.	8.00	8.00	8.00
05.	Dominant Wind Direction (From)	----	WSW	W	W
06.	Average Wind Speed	Km/Hr.	9.3	9.8	8.1
07.	Average flow rate during sampling	m <sup>3</sup> /Hr.	1.0	1.0	1.0
08.	Average flow rate for Gas sampling	LPM	0.2	0.2	0.2
09.	Permissible limits for PM 10*	µg/m <sup>3</sup>	3000	3000	3000
10.	Measured Concentration of PM 10	µg/m <sup>3</sup>	1125	1163	1296
11.	Permissible limits for SO <sub>2</sub> *	µg/m <sup>3</sup>	150	150	150
12.	Measured Concentration of SO <sub>2</sub>	µg/m <sup>3</sup>	12.4	13.0	14.6
13.	Permissible limits for NO <sub>2</sub> *	µg/m <sup>3</sup>	120	120	120
14.	Measured Concentration of NO <sub>2</sub>	µg/m <sup>3</sup>	22.9	20.7	24.5
15.	Permissible limit for CO **	µg/m <sup>3</sup>	2000	2000	2000
16.	Measured Concentration of CO	µg/m <sup>3</sup>	BDL	BDL	BDL
17.	Permissible limit for Pb*	µg/m <sup>3</sup>	2	2	2
18.	Measured Concentration of Pb	µg/m <sup>3</sup>	ND	ND	ND

Instrument used : (1) 3 Nos. RDS (APM - 217 BL), (2) 3 Nos. Gaseous Sampler (APM 109)  
All Calibration due on : 05/05/2018

BDL= Below Detectable Limit  
ND= Not Detectable

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Ref. No. : 257/07/2017-18

DATE: 04/08/2017

### AMBIENT NOISE LEVEL MEASUREMENT

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

Date of sampling : 9th July, 2017

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	47.3	63.2	57.6	44.8	57.6	53.9
02.	Old Colony	44.2	57.1	54.8	43.4	54.6	48.6
03.	Nr. LPG Yard	46.8	55.6	52.4	44.1	56.8	52.6
04.	New Colony (School)	43.9	56.4	52.5	45.8	55.2	51.1
05.	Nr. SDP-2	53.8	62.1	58.7	54.5	57.1	55.6
06.	Nr. Coating Plant	54.6	64.3	59.6	53.1	59.6	55.8
07.	Nr. Gate No. 2	53.2	58.6	55.2	48.5	57.5	53.8
08.	Nr. Sinter Plant-1	56.3	72.1	66.5	54.9	61.5	58.9
09.	Nr. Sinter Plant-2	56.8	69.1	63.9	53.4	67.3	61.2
10.	Nr. Blast Furnace-1	55.1	61.2	58.1	53.1	63.6	59.1
11.	Nr. Blast Furnace-2	57.1	62.3	59.3	48.6	60.3	57.9
12.	Nr. Main Gate (Security Office)	50.2	58.4	56.1	45.6	58.6	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 : 12/09/2017

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Ref. No. : 240/07/17-18

DATE: 04/08/2017

### 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 - 7
01	Date of Sampling	---	21/07/2017
02	Attached to	---	Sinter Furnace
03	Stack Height	Meter	50
04	Stack Diameter	Meter	2.0
05	Stack Temperature	°C	136
06	Ambient Temperature	°C	29
07	Average Velocity of Flue Gases	m/sec.	17.8
08	IsoKinetic Flowrate for Sampling	LPM	25
09	Inlet	mg/Nm <sup>3</sup>	1142
10	Outlet	mg/Nm <sup>3</sup>	33
11	Efficiency	%	97.11

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

Calibration due on 12/09/2017

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Ph.: +91 281 2360695 ■ E-mail : royalenvironment@live.com ■ admin@royalconsultancy.com

Ref. No. : 241/07/17-18

DATE: 04/08/2017

### 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-22	S - 23
01	Date of Sampling	---	25/07/2017	25/07/2017
02	Attached to	---	Zinc Coating Machine	Zinc Coating - V
03	Stack Height	Meter	30	30
04	Stack Duct Diameter	Meter	0.6	0.9
05	Stack Temperature	°C	40	41
06	Ambient Temperature	°C	27	27
07	Average Velocity of Flue Gases	m/sec.	11.3	11.1
08	IsoKinetic Flowrate for Sampling	LPM	20	21
09	Inlet	mg/Nm <sup>3</sup>	1397	1289
10	Outlet	mg/Nm <sup>3</sup>	27	27
11	Efficiency	%	98.07	97.91

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

Calibration due on 12/09/2017

Royal Environment Auditing & Consultancy Service



Sandip  
Analyst



# Royal

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Ref. No. : 242/07/17-18

DATE: 04/08/2017

### 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 - 6
01	Date of Sampling	---	08-07-2017	08/07/2017
02	Time of sampling	---	11.15	12.30
03	Stack Attached to	---	Sinter Furnace	Discharge End
04	Air Pollution Control Measures	---	ESP	ESP
05	Stack Height	Meter	50	32
06	Stack Diameter	Meter	2.0	1.30
07	Stack Temperature	°C	137	126
08	Ambient Temperature	°C	30	30
09	Average Velocity of Flue Gases	m/sec.	7.2	7.3
10	Isokinetic flow rate for P.M. Sampling	LPM	17	22
11	Gaseous Sampling Flow Rate	LPM	2.0	NA
12	Permissible limits for PM	mg/Nm <sup>3</sup>	150	150
13	Measured Concentration of PM.	mg/Nm <sup>3</sup>	32	18
14	Permissible limits for SO <sub>2</sub>	ppm	100	NA
15	Measured Concentration of SO <sub>2</sub>	ppm	ND	....
16	Permissible limits for NO <sub>x</sub>	ppm	50	NA
17	Measured Concentration of NO <sub>x</sub>	ppm	21.8	....

Note : Minimum Detectable Limit of SO<sub>2</sub> & No<sub>x</sub> is 0.1 and 0.01 ppm respectively.

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

Calibration due on : 12/09/2017

NA= Not Applicable

ND=Not Detectable





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Ref. No. : 243/07/17-18

DATE: 04/08/2017

### 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 - 6	S - 7	S - 9
01	Date of Sampling	---	05/07/2017	05/07/2017	05/07/2017
02	Time of sampling	Hr.	9.45	11.15	15.30
03	Stack Attached to	---	Secondary Mixer De-duster system	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	---	2	1.3
07	Stack Temperature	°C	33	128	112
08	Ambient Temperature	°C	31	31	31
09	Average Velocity of Flue Gases	m/sec.	2.18	10.6	10.8
10	Isokinetic flow rate for P.M. Sampling	LPM	9	13	16
11	Gaseous Sampling Flow Rate	LPM	NA	2.0	NA
12	Permissible limits for PM	mg/Nm <sup>3</sup>	150	150	150
13	Measured Concentration of PM	mg/Nm <sup>3</sup>	18	38	23
14	Permissible limits for SO <sub>2</sub>	ppm	NA	100	NA
15	Measured Concentration of SO <sub>2</sub>	ppm	---	2.8	---
16	Permissible limits for NO <sub>x</sub>	ppm	NA	50	NA
17	Measured Concentration of NO <sub>x</sub>	ppm	---	20.5	---

Note : Minimum Detectable Limit of SO<sub>2</sub> & No<sub>x</sub> is 0.1 and 0.01 ppm respectively.

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

Calibration due on : 12/09/2017

NA= Not Applicable

ND= Not Detectable





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Ref. No. : 244/07/17-18

DATE: 04/08/2017

### 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
01	Date of Sampling	---	06/07/2017	07/07/2017	07/07/2017
02	Time of sampling	Hr.	10.20	11.35	12.35
03	Stack Attached to	---	Dedusting System	Boiler - I	Boiler - II
04	Air Pollution Control Measures	---	Bag Filter	---	---
05	Stack Height	Meter	35.0	45	45
06	Stack Diameter	Meter	1.5	1.4	1.4
07	Stack Temperature	°C	45	159	163
08	Ambient Temperature	°C	34	32	32
09	Average Velocity of Flue Gases	m/sec.	9.9	5.8	6.1
10	Isokinetic flow rate for P.M. Sampling	LPM	16	17	15
11	Gaseous Sampling Flow Rate	LPM	2.0	2.0	2.0
12	Permissible limits for PM	mg/Nm <sup>3</sup>	150	50	50
13	Measured Concentration of PM.	mg/Nm <sup>3</sup>	14.00	7.00	6.00
14	Permissible limits for SO <sub>2</sub>	ppm	100	250	250
15	Measured Concentration of SO <sub>2</sub>	ppm	ND	7.5	8.1
16	Permissible limits for NO <sub>x</sub>	ppm	50	150	150
17	Measured Concentration of NO <sub>x</sub>	ppm	ND	11.3	14.5
18	Permissible limits for CO vol/vol	%	N.A.	1 % Max.	1 % Max.
19	Measured Concentration of CO vol/vol	%	N.A.	0.3	0.5

Note : Minimum Detectable Limit of SO<sub>2</sub> & No<sub>x</sub> is 0.1 and 0.01 ppm respectively.

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

Calibration due on : 12/09/2017





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Ref. No. : 245/07/17-18

DATE: 04/08/2017

### 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 - 4
01	Date of Sampling	---	06/07/2017	06/07/2017
02	Time of sampling	Hr.	10.15	11.15
03	Stack Attached to	---	Dedusting System	Coke fine building dust collecting system
04	Air Pollution Control Measures	---	Bag Filter	Bag Filter
05	Stack Height	Meter	40.0	30.0
06	Stack Diameter	Meter	1.5	0.45
07	Stack Temperature	°C	36	39
08	Ambient Temperature	°C	33	33
09	Average Velocity of Flue Gases	m/sec.	11.0	6.9
10	Isokinetic flow rate for P.M. Sampling	LPM	19	17
11	Gaseous Sampling Flow Rate	LPM	NA	NA
12	Permissible limits for PM	mg/Nm <sup>3</sup>	150	150
13	Measured Concentration of PM.	mg/Nm <sup>3</sup>	9	11
14	Permissible limits for SO <sub>2</sub>	mg/Nm <sup>3</sup>	NA	NA
15	Measured Concentration of SO <sub>2</sub>	mg/Nm <sup>3</sup>	---	---
16	Permissible limits for NO <sub>x</sub>	mg/Nm <sup>3</sup>	NA	NA
17	Measured Concentration of NO <sub>x</sub>	mg/Nm <sup>3</sup>	---	---

Note : Minimum Detectable Limit of SO<sub>2</sub> & No<sub>x</sub> is 0.1 and 0.01 ppm respectively.

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

Calibration due on : 12/09/2017





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Ref. No. : 246/07/2017-18

DATE: 04/08/2017

### 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 - 22	S - 23
01	Date of Sampling	---	11/07/2017	11/07/2017
02	Time of sampling	Hr.	11.00	15.30
03	Stack Attached to	---	Mg Converter -III	Zn Coating - IV & V
04	Air Pollution Control Measures	---	Bag Filter	Cyclone Separator & Bag Filter
05	Stack Height	Meter	30	30
06	Stack Diameter	Meter	0.5	0.9
07	Stack Temperature	°C	50	41
08	Ambient Temperature	°C	29	30
09	Average Velocity of Flue Gases	m/sec.	6.21	8.79
10	Isokinetic flow rate for P.M. Sampling	LPM	9	22
11	Gaseous Sampling Flow Rate	LPM	2.0	2.0
12	Permissible limits for PM	mg/Nm <sup>3</sup>	150	20 (Zn)
13	Measured Concentration of PM	mg/Nm <sup>3</sup>	38	6 (Zn)
14	Permissible limits for SO <sub>2</sub>	mg/Nm <sup>3</sup>	40	NA
15	Measured Concentration of SO <sub>2</sub>	mg/Nm <sup>3</sup>	ND	---
16	Permissible limits for Nox	mg/Nm <sup>3</sup>	25	NA
17	Measured Concentration of Nox	mg/Nm <sup>3</sup>	3.5	---

Note : Minimum Detectable Limit of SO<sub>2</sub> & Nox is 0.1 and 0.01 ppm respectively.

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

Calibration due on : 12/09/2017

NA=Not Applicable

ND=Not Detectable





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Ref. No. : 249/07/2017-18

DATE: 04/08/2017

### 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 - 5	S - 6
01	Date of Sampling	---	10/07/2017	10/07/2017	10/07/2017
02	Time of sampling	Hr.	10.15	11.30	15.20
03	Stack Attached to	---	Magnesium Treatment	Zinc Coating	Tri- Grinding Section
04	Air Pollution Control Measures	---	Bag Filter	Bag Filler	Bag Filter
05	Stack Height	Meter	30	30	30
06	Stack Diameter	Meter	1.00	1.00	1.00
07	Stack Temperature	°C	46	35	33
08	Ambient Temperature	°C	31	32	31
09	Average Velocity of Flue Gases	m/sec	6.0	3.8	3.15
10	Isokinetic flow rate for PM Sampling	LPM	12	16	11.00
11	Gaseous Sampling Flow Rate	LPM	---	---	---
12	Permissible limits for PM	mg/Nm <sup>3</sup>	50	50	50
13	Measured Concentration of PM	mg/Nm <sup>3</sup>	11	21(Zn)	15.00
14	Permissible limits for SO <sub>2</sub>	PPM	NA	NA	NA
15	Measured Concentration of SO <sub>2</sub>	PPM	---	---	---
16	Permissible limits for NO <sub>x</sub>	PPM	NA	NA	NA
17	Measured Concentration of NO <sub>x</sub>	PPM	---	---	---

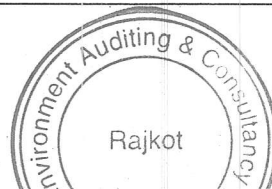
Note : Minimum Detectable Limit of SO<sub>2</sub> & No<sub>x</sub> is 0.1 and 0.01 ppm respectively.

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

Calibration due on : 12/09/2017

ND= Not Detectable

N.A= Not Applicable





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Ref. No. : Ref. No. : 247/07/2017-18

DATE: 04/08/2017

### 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 - 18
01	Date of Sampling	---	22/07/2017	22/07/2017	12/07/2017	12/07/2017	13/07/2017
02	Time of sampling	Hr.	10.15	12.15	14.45	15.10	11.30
03	Stack Attached to	---	Core Shop-I	Core Shop-II	Core Shop-III	Core Shop-IV	Core Cleaning & Dusting-II
04	Air Pollution Control Measures	---	---	---	---	---	Bag Filter
05	Stack Height	Meter	30	30	30	30	30
06	Stack Diameter	Meter	0.584	0.58	0.584	0.584	0.6
07	Stack Temperature	°C	30	33	33	32	45
08	Ambient Temperature	°C	27	27	27	28	29
09	Average Velocity of Flue Gases	m/sec.	1.6	2.1	4.3	2.5	7.6
10	Isokinetic flow rate for P.M. Sampling	LPM	12	10	16	13	14
11	Gaseous Sampling Flow Rate	LPM	2.0	2.0	2.0	2.0	2.0
12	Permissible limits for PM	mg/Nm <sup>3</sup>	150	150	150	150	150
13	Measured Concentration of PM	mg/Nm <sup>3</sup>	14	11	13	12	35
14	Permissible limits for SO <sub>2</sub>	mg/Nm <sup>3</sup>	40	40	40	40	40
15	Measured Concentration of SO <sub>2</sub>	mg/Nm <sup>3</sup>	1.3	1.6	1.2	1.5	ND
16	Permissible limits for Nox	mg/Nm <sup>3</sup>	25	25	25	25	25
17	Measured Concentration of Nox	mg/Nm <sup>3</sup>	4.5	3.8	3.2	2.7	5.1

Note : Minimum Detectable Limit of SO<sub>2</sub> & Nox is 0.1 and 0.01 ppm respectively.

ND= Not Detectable

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

Calibration due on : 12/09/2017



*Madga*

*Sandip*



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Ref. No. : 248/07/2017-18

DATE: 04/08/2017

### 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
01	Date of Sampling	---	12/07/2017
02	Time of sampling	Hr.	15.00
03	<b>Stack Attached to</b>	---	<b>Sand Reclamation</b>
04	Air Pollution Control Measures	---	Bag Filter
05	Stack Height	Meter	30
06	Stack Diameter	Meter	0.9
07	Stack Temperature	°C	88
08	Ambient Temperature	°C	28
09	Average Velocity of Flue Gases	m/sec.	9.85
10	Isokinetic flow rate for P.M. Sampling	LPM	25
11	Gaseous Sampling Flow Rate	LPM	2.0
12	<b>Permissible limits for PM</b>	<b>mg/Nm3</b>	<b>150</b>
13	Measured Concentration of PM	mg/Nm3	39
14	<b>Permissible limits for SO<sub>2</sub></b>	<b>mg/Nm3</b>	<b>40</b>
15	Measured Concentration of SO <sub>2</sub>	mg/Nm3	1.3
16	<b>Permissible limits for NO<sub>x</sub></b>	<b>mg/Nm3</b>	<b>25</b>
17	Measured Concentration of NO <sub>x</sub>	mg/Nm3	14.2

Note : Minimum Detectable Limit of SO<sub>2</sub> & No<sub>x</sub> is 0.1 and 0.01 ppm respectively.

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

Calibration due on : 12/09/2017





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Ref. No. : 254/07/2017-18

DATE: 04/08/2017

### 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 : 8th July, 2017

Sr. No.	Location of Sampling	Value in dB(A)		
		Min.	Max.	Leq
1	Inside Control Room	41.9	47.5	44.5
2	Inside Mechanical Room	47.8	57.4	52.4
3	Inside Electrical Room	42.2	49.1	46.4
4	Inside Plant Office	45.3	56.3	52.3

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 : 12/09/2017

Royal Environment Auditing & Consultancy Service

Sandip  
Analyst





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Ref. No. : 255/07/2017-18

DATE: 04/08/2017

### 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 : 6th July, 2017

Sr. No.	Location of Sampling	Value in dB(A)		
		Min.	Max.	Leq
01.	Nr. Stock House	62.9	76.4	70.4
02.	Inside Control Room	48.2	55.9	52.9
03.	Inside Control room of Cast House	45.1	55.6	49.8
04.	Inside Laboratory	43.2	49.6	47.3
05.	Inside Control Room of Blower House	56.2	59.2	57.8
06.	Inside Control Room of CPP	52.3	62.5	57.2

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 : 12/09/2017

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Ref. No. : 256/07/2017-18

DATE: 04/08/2017

### 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 July, 2017

Sr. No.	Location of Sampling	Value in dB(A)		
		Min.	Max.	Leq
01.	Inside Control Room of Annealing Furnace of DISP / SDP	46.5	54.2	49.2
02	Inside DISP / SDP Plant	64.1	69.7	65.4
03	Nr. CCM SDP-2	60.2	69.7	66.4
04	Nr. Zinc Coating SDP-2	62.2	68.4	64.8

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 : 12/09/2017

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Ref. No. : 258/07/2017-18

DATE: 04/08/2017

### 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 : 6th July, 2017

Sr. No.	Location of Sampling	Value in dB(A)		
		Min.	Max.	Leq
01.	Inside Control Room	52.2	58.4	55.3
02.	Nr. Stock House	51.5	62.5	57.6
03.	C/R Blower House	56.3	63.1	58.7

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 : 12/09/2017

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Ref. No. : 259/07/2017-18

DATE: 04/08/2017

### WORK ZONE NOISE LEVEL MEASUREMENT

#### SINTER PLANT - 2 (29017)

Name of company : JINDAL SAW LIMITED,

Village: Samaghogha,

Tal. : Mundra, Dist. Kutch

Date of sampling : 5th July, 2017

Sr. No.	Location of Sampling	Value in dB(A)		
		Min.	Max.	Leq
01.	Inside Control Room	46.3	54.7	50.5
02.	Inside Operator Room	57.6	62.7	59.3
03.	Near Proportioning Bulding	54.6	63.2	58.6
04.	Near Crusher House	61.3	65.7	63.4

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 : 12/09/2017

Royal Environment Auditing & Consultancy Service

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Analyst





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## Environment Auditing & Consultancy Service

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Ref. No. : 260/07/2017-18

DATE: 04/08/2017

### 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 : 29/07/2017

Test Method : As per IS Standards - 3025

Sr. No.	Parameters	Unit	GPCB limits for Treated Effluent	Raw Sewage	Treated Effluent
01.	pH	pH Unit	---	7.50	7.05
02.	BOD (3 Days at 27°C)	mg/l	<20	150	7
03.	Total Dissolve Solid	mg/l	...	1352	1456
04.	COD	mg/l	...	125	33
05.	Total Suspended Solid	mg/l	<30	145	9
06.	Oil & Grease	mg/l	...	ND	ND
07.	Residual Chlorine	mg/l	Min. 0.5	---	0.69

ND=Not Detectable

Royal Environment Auditing & Consultancy Service

Sandip  
Analyst



Ref. No. : 250/07/2017-18

DATE: 04/08/2017

**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 : 5th July, 2017

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	mg/m3					
1	Sinter Plant- At First Floor	Total Dust	Personal Respirable Dust sampler IAS 001	02	1.1-1.4	1.25	10	Gravimetric	6	---	<i>Sandip</i>	Mr. Sandip Ramoliya

Instruments used : Envirotech make personal sampler, Model No. IAS 001

Calibration Due on. : 12/11/2017

For. Royal Environment Auditing & Consultancy Service

*Sandip*  
Authorized Sign



**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 : 8th July, 2017

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	mg/m3					
1	Sinter Plant At First Floor	Total Dust	Personal Respirable Dust sampler IAS 001	02	1.3-1.6	1.5	10	Gravimetric	3	---	<i>Sandip</i>	Mr.Sandip Ramoliya

Instruments used : Envirotech make personal sampler, Model No. IAS 001

Calibration Due on. : 12/11/2017

For. Royal Environment Auditing & Consultancy Service

*Sandip*  
Authorized Sign



Ref. No. : 252/07/2017-18

DATE: 04/08/2017

**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 : 9th July, 2017

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 person taking samples	Name (in block letters)
				Number of sample	Range	Average	mg/m3					
1	BF Plant (Cast House)	CO	Personal Respirable Dust sampler IAS 001	02	11-13	12.0	50 (ppm)	Gravimetric	5	---	<i>Sandip</i>	Mr. Sandip Ramoliya
		Total Dust			2.7-3.1	2.90	10					

Instruments used : Envirotech make personal sampler, Model No. IAS 001  
Calibration Due on. : 12/11/2017

For. Royal Environment Auditing & Consultancy Service

*Sandip*  
Authorized Sign



**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 : 9th July, 2017

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	mg/m3					
1	CCM Area (SDP / DISP)	Total Dust	Personal Respirable Dust sampler IAS 001	02	3.1-3.9	3.5	10	Gravimetric	5	---	<i>Sandip</i>	Mr. Sandip Ramoliya

Instruments used : Envirotech make personal sampler, Model No. IAS 001

Calibration Due on. : 12/11/2017

For. Royal Environment Auditing & Consultancy Service

*Sandip*  
Authorized Sign

