



# Royal

## Environment Auditing & Consultancy Service

303-304, Shivalik-7, B/s Bal Adalat, Gondal Road, RAJKOT - 360 002.  
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Ref. No. : 200/08/2019-20

Date : 31/08/2019

### NATIONAL AMBIENT AIR QUALITY MONITORING REPORT FOR THE MONTH - AUGUST: 2019

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

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

NABL Certificate No. : TC 5948

Sr.No.	Particulars	Unit	Location No.1 : STP								
			1	2	3	4	5				
01.	No. of Week	---									
02.	Date & Time Starting of Monitoring	---	03/08/19 09.00	06/08/19 09.30	09/08/19 09.30	12/08/19 09.15	16/08/19 09.10	19/08/19 09.45	23/08/19 09.20	26/08/19 09.15	30/08/19 09.00
03.	Date & Time Ending of Monitoring	---	04/08/19 09.00	07/08/19 09.30	10/08/19 09.45	13/08/19 09.15	17/08/19 09.10	20/08/19 09.45	24/08/19 09.20	27/08/19 09.15	31/08/19 09.00
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	---	SSE	SWS	W	WNW	W	WSW	NW	NW	SW
06.	Average Wind Speed	Km/Hr.	5.2	5.0	4.0	6.1	5.9	5.6	5.8	6.7	6.1
07.	Average flow rate for Dust Monitoring PM10	m <sup>3</sup> /min.	1.10	1.20	1.11	1.20	1.10	1.20	1.10	1.20	1.10
08.	Average flow rate for Dust Monitoring PM2.5	m <sup>3</sup> /hr.	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
10.	Permissible limits for PM10*	µg/m <sup>3</sup>	100	100	100	100	100	100	100	100	100
11.	Measured Concentration of PM10	µg/m <sup>3</sup>	50	43	47	41	45	46	40	42	52
12.	Permissible limits for PM2.5*	µg/m <sup>3</sup>	60	60	60	60	60	60	60	60	60
13.	Measured Concentration of PM2.5	µg/m <sup>3</sup>	32	37	38	31	32	38	35	30	33
14.	Permissible limits for SO <sub>2</sub> *	µg/m <sup>3</sup>	80	80	80	80	80	80	80	80	80
15.	Measured Concentration of SO <sub>2</sub>	µg/m <sup>3</sup>	10.5	10.2	10.7	9.8	11.3	10.9	13.3	14.5	15.4
16.	Permissible limits for NO <sub>2</sub> *	µg/m <sup>3</sup>	80	80	80	80	80	80	80	80	80
17.	Measured Concentration of NO <sub>2</sub>	µg/m <sup>3</sup>	21.3	18.4	17.7	14.9	13.5	18.2	15.1	15.7	19.5
18.	Permissible limit for CO **	µg/m <sup>3</sup>	2000	2000	2000	2000	2000	2000	2000	2000	2000
19.	Measured Concentration of CO #	µg/m <sup>3</sup>	BDL	BDL	BDL	BDL	BDL	BDL	BDL	B.D.L.	B.D.L.

Instrument used : RDS (APM - 217 BL), Gaseous Sampler (AAS 109), PM 2.5 Sampler (AAS 127)

Calibration done on : 05/05/2019

# Parameters are not covered in NABL Scope

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

Royal Environment Auditing & Consultancy Service



*Shukla*  
Analyst



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Ref. No. : 201/08/2019-20

Date : 31/08/2019

### NATIONAL AMBIENT AIR QUALITY MONITORING REPORT FOR THE MONTH - AUGUST: 2019

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

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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	Location No.2 : Vikashpuram								
			1	2	3	4	5				
01.	No. of Week	---									
02.	Date & Time Starting of Monitoring	---	03/08/19 09.00	06/08/19 09.30	09/08/19 09.30	12/08/19 09.15	16/08/19 09.10	19/08/19 09.45	23/08/19 09.20	26/08/19 09.15	30/08/19 09.00
03.	Date & Time Ending of Monitoring	---	04/08/19 09.00	07/08/19 09.30	10/08/19 09.45	13/08/19 09.15	17/08/19 09.10	20/08/19 09.45	24/08/19 09.20	27/08/19 09.15	31/08/19 09.00
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	---	SSE	SWS	W	WNW	W	WSW	NW	NW	SW
06.	Average Wind Speed	Km/Hr.	4.9	5.1	3.6	6.8	7.1	6.8	4.2	7.1	6.7
07.	Average flow rate for Dust Monitoring PM10	m <sup>3</sup> /min.	1.10	1.20	1.20	1.10	1.20	1.20	1.10	1.10	1.20
08.	Average flow rate for Dust Monitoring PM2.5	m <sup>3</sup> /hr.	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
10.	Permissible limits for PM10*	µg/m <sup>3</sup>	100	100	100	100	100	100	100	100	100
11.	Measured Concentration of PM10	µg/m <sup>3</sup>	54	57	44	58	46	43	55	52	47
12.	Permissible limits for PM2.5*	µg/m <sup>3</sup>	60	60	60	60	60	60	60	60	60
13.	Measured Concentration of PM2.5	µg/m <sup>3</sup>	31	43	33	35	38	36	41	32	37
14.	Permissible limits for SO <sub>2</sub> *	µg/m <sup>3</sup>	80	80	80	80	80	80	80	80	80
15.	Measured Concentration of SO <sub>2</sub>	µg/m <sup>3</sup>	10.6	10.2	9.7	10.5	9.3	9.7	13.1	12.6	13.7
16.	Permissible limits for NO <sub>2</sub> *	µg/m <sup>3</sup>	80	80	80	80	80	80	80	80	80
17.	Measured Concentration of NO <sub>2</sub>	µg/m <sup>3</sup>	17.3	19.5	18.2	15.7	16.3	18.5	23.4	24.2	23.9
18.	Permissible limit for CO **	µg/m <sup>3</sup>	2000	2000	2000	2000	2000	2000	2000	2000	2000
19.	Measured Concentration of CO#	µg/m <sup>3</sup>	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Instrument used : RDS (APM - 217 BL), Gaseous Sampler (AAS 109), PM 2.5 Sampler (AAS 127)

Calibration done on : 05/05/2019

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

# Parameters are not covered in NABL Scope

Royal Environment Auditing & Consultancy Service



*Dharmet*  
Analyst



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Ref. No. : 202/08/2019-20

Date : 31/08/2019

### NATIONAL AMBIENT AIR QUALITY MONITORING REPORT FOR THE MONTH - AUGUST: 2019

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

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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	Location No.3 : Nr. Spiral-II Pipe Storage Yard									
			1	2	3	4	5					
01.	No. of Week	----										
02.	Date & Time Starting of Monitoring	---	03/08/19 09.00	06/08/19 09.30	09/08/19 09.30	12/08/19 09.15	16/08/19 09.10	19/08/19 09.45	23/08/19 09.20	26/08/19 09.15	30/08/19 09.00	
03.	Date & Time Ending of Monitoring	---	04/08/19 09.00	07/08/19 09.30	10/08/19 09.45	13/08/19 09.15	17/08/19 09.10	20/08/19 09.45	24/08/19 09.20	27/08/19 09.15	31/08/19 09.00	
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	
05.	Dominant Wind Direction (From)	---	SSE	SWS	W	WNW	W	WSW	NW	NW	SW	
06.	Average Wind Speed	Km/Hr.	5.6	4.2	5.2	6.2	5.8	6.6	5.6	4.8	6.0	
07.	Average flow rate for Dust Monitoring PM10	m <sup>3</sup> /min.	1.20	1.10	1.10	1.20	1.10	1.2	1.2	1.10	1.20	
08.	Average flow rate for Dust Monitoring PM2.5	m <sup>3</sup> /hr.	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	
10.	Permissible limits for PM10*	µg/m <sup>3</sup>	100	100	100	100	100	100	100	100	100	
11.	Measured Concentration of PM10	µg/m <sup>3</sup>	58	56	60	54	63	55	65	60	57	
12.	Permissible limits for PM2.5*	µg/m <sup>3</sup>	60	60	60	60	60	60	60	60	60	
13.	Measured Concentration of PM2.5	µg/m <sup>3</sup>	34	30	35	33	40	38	35	41	37	
14.	Permissible limits for SO <sub>2</sub> *	µg/m <sup>3</sup>	80	80	80	80	80	80	80	80	80	
15.	Measured Concentration of SO <sub>2</sub>	µg/m <sup>3</sup>	12.6	11.3	10.6	13.1	12.6	11.8	11.2	14.3	12.4	
16.	Permissible limits for NO <sub>2</sub> *	µg/m <sup>3</sup>	80	80	80	80	80	80	80	80	80	
17.	Measured Concentration of NO <sub>2</sub>	µg/m <sup>3</sup>	20.5	23.6	22.3	19.4	22.7	21.8	24.2	26.5	29.4	
18.	Permissible limit for CO **	µg/m <sup>3</sup>	2000	2000	2000	2000	2000	2000	2000	2000	2000	
19.	Measured Concentration of CO #	µg/m <sup>3</sup>	B.D.L.	BDL	BDL	BDL	BDL	BDL	BDL	B.D.L.	B.D.L.	

Instrument used : RDS (APM - 217 BL), Gaseous Sampler (AAS 109), PM 2.5 Sampler (AAS 127)

Calibration done on : 05/05/2019

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

# Parameters are not covered in NABL Scope

Royal Environment Auditing & Consultancy Service



*Bhureut*  
Analyst



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Ref. No. : 203/08/2019-20

Date : 31/08/2019

### NATIONAL AMBIENT AIR QUALITY MONITORING REPORT FOR THE MONTH - AUGUST: 2019

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

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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	Location No.4 : Old Colony									
			1	2		3		4		5		
01.	No. of Week	----										
02.	Date & Time Starting of Monitoring	----	03/08/19 09.00	06/08/19 09.30	09/08/19 09.30	12/08/19 09.15	16/08/19 09.10	19/08/19 09.45	23/08/19 09.20	26/08/19 09.15	30/08/19 09.00	
03.	Date & Time Ending of Monitoring	----	04/08/19 09.00	07/08/19 09.30	10/08/19 09.45	13/08/19 09.15	17/08/19 09.10	20/08/19 09.45	24/08/19 09.20	27/08/19 09.15	31/08/19 09.00	
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	
05.	Dominant Wind Direction (From)	----	SSE	SWS	W	WNW	W	WSW	NW	NW	SW	
06.	Average Wind Speed	Km/Hr.	5.3	4.9	5.6	6.2	6.7	7.1	5.2	5.9	6.1	
07.	Average flow rate for Dust Monitoring PM10	m <sup>3</sup> /min.	1.20	1.10	1.10	1.10	1.20	1.10	1.20	1.10	1.10	
08.	Average flow rate for Dust Monitoring PM2.5	m <sup>3</sup> /hr.	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	
10.	Permissible limits for PM10*	µg/m <sup>3</sup>	100	100	100	100	100	100	100	100	100	
11.	Measured Concentration of PM10	µg/m <sup>3</sup>	66	47	61	68	54	65	63	56	48	
12.	Permissible limits for PM2.5*	µg/m <sup>3</sup>	60	60	60	60	60	60	60	60	60	
13.	Measured Concentration of PM2.5	µg/m <sup>3</sup>	33	45	38	32	37	29	45	42	36	
14.	Permissible limits for SO <sub>2</sub> *	µg/m <sup>3</sup>	80	80	80	80	80	80	80	80	80	
15.	Measured Concentration of SO <sub>2</sub>	µg/m <sup>3</sup>	13.6	14.2	15.8	16.7	14.7	16.2	12.5	13.8	15.4	
16.	Permissible limits for NO <sub>2</sub> *	µg/m <sup>3</sup>	80	80	80	80	80	80	80	80	80	
17.	Measured Concentration of NO <sub>2</sub>	µg/m <sup>3</sup>	19.2	19.3	21.3	24.5	18.4	23.4	22.1	23.7	26.6	
18.	Permissible limit for CO **	µg/m <sup>3</sup>	2000	2000	2000	2000	2000	2000	2000	2000	2000	
19.	Measured Concentration of CO #	µg/m <sup>3</sup>	B.D.L.	BDL	BDL	BDL	BDL	BDL	BDL	B.D.L.	B.D.L.	

Instrument used : RDS (APM - 217 BL), Gaseous Sampler (AAS 109), PM 2.5 Sampler (AAS 127)

Calibration done on : 05/05/2019

# Parameters are not covered in NABL Scope

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

Royal Environment Auditing & Consultancy Service



Bharat  
Analyst



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Ref. No. :204/08/2019-20

Date : 31/08/2019

### 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	A-4
01.	Location of Ambient	----	<b>BF-2 Cast House</b>	<b>BF-2 Ground Hopper</b>
02.	Date of sampling	----	21/08/2019	20/08/2019
03.	Time of sampling	----	9.25	10.15
04.	Duration of Sampling	Hr.	8.00	8.00
05.	Dominant Wind Direction (From)	----	SSE	SE
06.	Average Wind Speed	Km/Hr.	5.2	5.1
07.	Average flow rate during sampling	m <sup>3</sup> /Hr.	1.0	1.0
08.	Average flow rate for Gas sampling	LPM	0.2	0.2
09.	<b>Permissible limits for PM 10*</b>	<b>µg/m<sup>3</sup></b>	<b>3000</b>	<b>3000</b>
10.	Measured Concentration of PM 10	µg/m <sup>3</sup>	1260	1384
11.	<b>Permissible limits for SO<sub>2</sub>*</b>	<b>µg/m<sup>3</sup></b>	<b>150</b>	<b>150</b>
12.	Measured Concentration of SO <sub>2</sub>	µg/m <sup>3</sup>	13.7	16.4
13.	<b>Permissible limits for NO<sub>2</sub>*</b>	<b>µg/m<sup>3</sup></b>	<b>120</b>	<b>120</b>
14.	Measured Concentration of NO <sub>2</sub>	µg/m <sup>3</sup>	22.8	24.3
15.	<b>Permissible limit for CO **</b>	<b>µg/m<sup>3</sup></b>	<b>2000</b>	<b>2000</b>
16.	Measured Concentration of CO #	µg/m <sup>3</sup>	BDL	BDL
17.	<b>Permissible limit for Pb*</b>	<b>µg/m<sup>3</sup></b>	<b>2</b>	<b>2</b>
18.	Measured Concentration of Pb #	µg/m <sup>3</sup>	ND	ND

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

# Parameters are not covered in NABL Scope

BDL= Below Detectable Limit ND= Not Detectable

Royal Environment Auditing & Consultancy Service



*Bhurest*  
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Ref. No. :205/08/2019-20

Date : 31/08/2019

### 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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	A - 1
01.	Location of Ambient	----	Sinter-2 Ground Hopper
02.	Date of sampling	----	19/08/2019
03.	Time of sampling	----	9.30
04.	Duration of Sampling	Hr.	8.00
05.	Dominant Wind Direction (From)	----	SSE
06.	Average Wind Speed	Km/Hr.	6.1
07.	Average flow rate during sampling	m <sup>3</sup> /Hr.	1.0
08.	Average flow rate for Gas sampling	LPM	0.2
09.	<b>Permissible limits for PM 10*</b>	<b>µg/m<sup>3</sup></b>	<b>3000</b>
10.	Measured Concentration of PM 10	µg/m <sup>3</sup>	1236
11.	<b>Permissible limits for SO<sub>2</sub> *</b>	<b>µg/m<sup>3</sup></b>	<b>150</b>
12.	Measured Concentration of SO <sub>2</sub>	µg/m <sup>3</sup>	18.6
13.	<b>Permissible limits for NO<sub>2</sub> *</b>	<b>µg/m<sup>3</sup></b>	<b>120</b>
14.	Measured Concentration of NO <sub>2</sub>	µg/m <sup>3</sup>	24.3
15.	<b>Permissible limit for CO **</b>	<b>µg/m<sup>3</sup></b>	<b>2000</b>
16.	Measured Concentration of CO #	µg/m <sup>3</sup>	BDL
17.	<b>Permissible limit for Pb*</b>	<b>µg/m<sup>3</sup></b>	<b>2</b>
18.	Measured Concentration of Pb #	µg/m <sup>3</sup>	ND

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

Calibration done on : 05/05/2019

# Parameters are not covered in NABL Scope

BDL= Below Detectable Limit

ND= Not Detectable

Royal Environment Auditing & Consultancy Service



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Ref. No. :206/08/2019-20

Date : 31/08/2019

### 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

**NABL Certificate No. : TC 5948**

Sr. No.	Particulars	Unit	A - 5
01.	Location of Ambient	----	Induction Furnace DISP
02.	Date of sampling	----	19/08/2019
03.	Time of sampling	----	9.15
04.	Duration of Sampling	Hr.	8.00
05.	Dominant Wind Direction (From)	----	NE
06.	Average Wind Speed	Km/Hr.	4.6
07.	Average flow rate during sampling	m <sup>3</sup> /Hr.	1.0
08.	Average flow rate for Gas sampling	LPM	0.2
09.	<b>Permissible limits for PM 10*</b>	<b>µg/m<sup>3</sup></b>	<b>3000</b>
10.	Measured Concentration of PM 10	µg/m <sup>3</sup>	1375
11.	<b>Permissible limits for SO<sub>2</sub>*</b>	<b>µg/m<sup>3</sup></b>	<b>150</b>
12.	Measured Concentration of SO <sub>2</sub>	µg/m <sup>3</sup>	14.3
13.	<b>Permissible limits for NO<sub>2</sub>*</b>	<b>µg/m<sup>3</sup></b>	<b>120</b>
14.	Measured Concentration of NO <sub>2</sub>	µg/m <sup>3</sup>	17.1
15.	<b>Permissible limit for CO **</b>	<b>µg/m<sup>3</sup></b>	<b>2000</b>
16.	Measured Concentration of CO #	µg/m <sup>3</sup>	BDL
17.	<b>Permissible limit for Pb*</b>	<b>µg/m<sup>3</sup></b>	<b>2</b>
18.	Measured Concentration of Pb #	µg/m <sup>3</sup>	ND

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

Calibration done on : 05/05/2019

# Parameters are not covered in NABL Scope

Royal Environment Auditing & Consultancy Service



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Ref. No. :207/08/2019-20

Date : 31/08/2019

### 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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	A - 6
01.	Location of Ambient	----	BF-1 Dedusting System
02.	Date of sampling	----	29/08/2019
03.	Time of sampling	----	10.15
04.	Duration of Sampling	Hr.	8.00
05.	Dominant Wind Direction (From)	----	SE
06.	Average Wind Speed	Km/Hr.	5.5
07.	Average flow rate during sampling	m <sup>3</sup> /Hr.	1.0
08.	Average flow rate for Gas sampling	LPM	0.2
09.	<b>Permissible limits for PM 10*</b>	<b>µg/m<sup>3</sup></b>	<b>3000</b>
10.	Measured Concentration of PM 10	µg/m <sup>3</sup>	1367
11.	<b>Permissible limits for SO<sub>2</sub>*</b>	<b>µg/m<sup>3</sup></b>	<b>150</b>
12.	Measured Concentration of SO <sub>2</sub>	µg/m <sup>3</sup>	15.3
13.	<b>Permissible limits for NO<sub>2</sub>*</b>	<b>µg/m<sup>3</sup></b>	<b>120</b>
14.	Measured Concentration of NO <sub>2</sub>	µg/m <sup>3</sup>	17.2
15.	<b>Permissible limit for CO **</b>	<b>µg/m<sup>3</sup></b>	<b>2000</b>
16.	Measured Concentration of CO #	µg/m <sup>3</sup>	BDL
17.	<b>Permissible limit for Pb*</b>	<b>µg/m<sup>3</sup></b>	<b>2</b>
18.	Measured Concentration of Pb #	µg/m <sup>3</sup>	ND

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

Calibration done on : 05/05/2019

# Parameters are not covered in NABL Scope

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Ref. No. : 208/08/2019-20

Date : 31/08/2019

### 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

*NABL Certificate No. : TC 5948*

Sr. No.	Particulars	Unit	S - 3
01	Date of Sampling	---	20/08/2019
02	Attached to	---	Sinter Furnace
03	Stack Height	Meter	50
04	Stack Diameter	Meter	2.0
05	Stack Temperature	°C	153
06	Ambient Temperature	°C	31
07	Average Velocity of Flue Gases	m/sec.	14.80
08	IsoKinetic Flowrate for Sampling	LPM	20
09	PM Concentration in Inlet	mg/Nm <sup>3</sup>	1330
10	PM Concentration in Outlet	mg/Nm <sup>3</sup>	55.3
11	Efficiency	%	95.84

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

Calibration Done On. : 13/09/2018

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Ref. No. : 209/08/2019-20

Date : 31/08/2019

### 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

*NABL Certificate No. : TC 5948*

Sr. No.	Particulars	Unit	S - 49
01	Date of Sampling	---	21/08/2019
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	31
07	Average Velocity of Flue Gases	m/sec.	9.11
08	IsoKinetic Flowrate for Sampling	LPM	17
09	Inlet	mg/Nm <sup>3</sup>	1035.2
10	Outlet	mg/Nm <sup>3</sup>	36.3
11	Efficiency	%	96.49

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

Calibration Done On. : 13/09/2018



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Ref. No. : 210/08/2019-20

Date : 31/08/2019

### 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

*NABL Certificate No. : TC 5948*

Sr. No.	Particulars	Unit	S - 7	S - 31
01	Date of Sampling	---	19/08/2019	23/08/2019
02	Attached to	---	Mg Converter I&II	Zn Coating - II
03	Stack Height	Meter	32	30
04	Stack Diameter	Meter	0.9	0.5
05	Stack Temperature	°C	46	36
06	Ambient Temperature	°C	31	31
07	Average Velocity of Flue Gases	m/sec.	6.15	8.68
08	IsoKinetic Flowrate for Sampling	LPM	11	16
09	PM Concentration in Inlet	mg/Nm <sup>3</sup>	412.5	485.3
10	PM Concentration in Outlet	mg/Nm <sup>3</sup>	55.3	16.1
11	Efficiency	%	86.59	96.68

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

Calibration Done On. : 13/09/2018

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Ref. No. : 211/08/2019-20

Date : 31/08/2019

### 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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	S-8	S-62	S-65
01	Date of Sampling	---	22/08/2019	21/08/2019	22/08/2019
02	Attached to	---	Mg Treatment	Zinc Coating	Zinc Coating FL-7
03	Stack Height	Meter	30	30	30
04	Stack Duct Diameter	Meter	0.5	1	1
05	Stack Temperature	°C	48	40	37
06	Ambient Temperature	°C	31	30	31
07	Average Velocity of Flue Gases	m/sec.	4.1	9.45	9.11
08	IsoKinetic Flowrate for Sampling	LPM	7	17	17
09	PM Concentration in Inlet	mg/Nm <sup>3</sup>	1205.6	330	415
10	PM Concentration in Outlet	mg/Nm <sup>3</sup>	18.3	18.7	16.0
11	Efficiency	%	98.48	94.33	96.14

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

Calibration Done On. : 13/09/2018

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Ref. No. : 212/08/2019-20

Date : 31/08/2019

### 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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	S - 3	S - 4	S - 5	S - 6
01	Date of Sampling	---	20/08/2019	20/08/2019	20/08/2019	20/08/2019
02	Time of sampling	---	9.45	10.15	10.50	12.30
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	130	32	34	144
08	Ambient Temperature	°C	30	30	31	31
09	Average Velocity of Flue Gases	m/sec.	11.30	7.25	3.42	10.50
10	Isokinetic flow rate for P.M. Sampling	LPM	16	13	6	14
11	Gaseous Sampling Flow Rate	LPM	2.0	NA	NA	NA
12	Permissible limits for PM	mg/Nm <sup>3</sup>	150	150	150	150
13	Measured Concentration of PM	mg/Nm <sup>3</sup>	55.3	22.4	16.5	45
14	Permissible limits for SO <sub>2</sub>	ppm	100	NA	NA	NA
15	Measured Concentration of SO <sub>2</sub>	ppm	12.3	....	....	....
16	Permissible limits for NO <sub>x</sub>	ppm	50	NA	NA	NA
17	Measured Concentration of NO <sub>x</sub>	ppm	23.7	....	....	....

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 Done On. : 13/09/2018

NA= Not Applicable  
ND=Not Detectable





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Ref. No. : 213/08/2019-20

Date : 31/08/2019

### 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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	S - 7	S - 3	S - 16	S - 13	S - 15
01	Date of Sampling	---	22/08/2019	22/08/2019	22/08/2019	22/08/2019	22/08/2019
02	Time of sampling	Hr.	10.30	11.30	11.00	14.25	15.30
03	Stack Attached to	---	Fuel crushing de-duster system (Flux)	Fuel Screening deduster System (Flux Screening)	Primary Mixer Drum	Sinter Furnace	Discharging End of sinter de-dusting system
04	Air Pollution Control Measures	---	Dust Collector	Dust Collector	Dust Collector	ESP	ESP
05	Stack Height	Meter	30	30	20	50	50
06	Stack Diameter	Meter	0.7	0.7	0.7	2	1.3
07	Stack Temperature	°C	42	38	34	135	133
08	Ambient Temperature	°C	30	31	31	31	31
09	Average Velocity of Flue Gases	m/sec.	6.35	7.45	2.44	7.32	8.15
10	Isokinetic flow rate for P.M. Sampling	LPM	11	14	5	10	11
11	Gaseous Sampling Flow Rate	LPM	NA	NA	NA	2.0	NA
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>	55.5	33.4	11.5	35.4	55.2
14	Permissible limits for SO <sub>2</sub>	ppm	NA	NA	NA	100	NA
15	Measured Concentration of SO <sub>2</sub>	ppm	---	---	---	7.3	---
16	Permissible limits for NO <sub>x</sub>	ppm	NA	NA	NA	50	NA
17	Measured Concentration of NO <sub>x</sub>	ppm	---	---	---	22.5	---

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 Done On. : 13/09/2018

NA= Not Applicable

ND= Not Detectable

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Ref. No. : 214/08/2019-20

Date : 31/08/2019

### 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

*NABL Certificate No. : TC 5948*

Sr. No.	Particulars	Unit	S - 44	S - 45	S - 46
01	Date of Sampling	---	13/08/2019	13/08/2019	22/08/2019
02	Time of sampling	Hr.	9.15	11.30	12.45
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	33	131	141
08	Ambient Temperature	°C	30	31	31
09	Average Velocity of Flue Gases	m/sec.	8.21	10.08	7.15
10	Isokinetic flow rate for P.M. Sampling	LPM	15	14	10
11	Gaseous Sampling Flow Rate	LPM	2.0	2.0	2.0
12	Permissible limits for PM	mg/Nm <sup>3</sup>	150	150	150
13	Measured Concentration of PM.	mg/Nm <sup>3</sup>	22.9	3.8	2.9
14	Permissible limits for SO <sub>2</sub>	ppm	100	100	100
15	Measured Concentration of SO <sub>2</sub>	ppm	ND	6.3	7.5
16	Permissible limits for NO <sub>x</sub>	ppm	50	50	50
17	Measured Concentration of NO <sub>x</sub>	ppm	ND	14.2	14.7
18	Permissible limits for CO vol/vol	%	N.A.	1 % Max.	1 % Max.
19	Measured Concentration of CO vol/vol #	%	ND	0.1	0.3

Note : Minimum Detectable Limit of SO<sub>2</sub> & Nox is 0.1 and 0.01 ppm respectively. # Parameters are not covered in NABL Scope N.D=Not Detectable

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

N.A.=Not Applicable

Calibration Done On. : 13/09/2018

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Ref. No. : 215/08/2019-20

Date : 31/08/2019

### 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

*NABL Certificate No. : TC 5948*

Sr. No.	Particulars	Unit	S - 49	S - 52	S - 53
01	Date of Sampling	---	21/08/2019	22/08/2019	21/08/2019
02	Time of sampling	Hr.	9.30	15.30	11.15
03	Stack Attached to	---	Dedusting System	Coke fine building dust collecting system	Iron Ore fine & Dust Collecting System
04	Air Pollution Control Measures	---	Bag Filter	Bag Filter	Bag Filter
05	Stack Height	Meter	40.0	30.0	30.0
06	Stack Diameter	Meter	1.5	0.45	0.35
07	Stack Temperature	°C	35	33	36
08	Ambient Temperature	°C	30	31	31
09	Average Velocity of Flue Gases	m/sec.	7.98	7.50	6.25
10	Isokinetic flow rate for P.M. Sampling	LPM	15	14	11
11	Gaseous Sampling Flow Rate	LPM	NA	NA	NA
12	Permissible limits for PM	mg/Nm <sup>3</sup>	150	150	150
13	Measured Concentration of PM.	mg/Nm <sup>3</sup>	36.3	26.8	45.5
14	Permissible limits for SO <sub>2</sub>	mg/Nm <sup>3</sup>	NA	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	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.

NA=Not Applicable

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

Calibration Done On. : 13/09/2018

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Ref. No. : 217/08/2019-20

Date : 31/08/2019

### 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 - 17	S - 18	S - 19	S - 18
01	Date of Sampling	---	14/08/2019	14/08/2019	19/08/2019	29/08/2019
02	Time of sampling	Hr.	16.30	15.20	11.00	10.30
03	Stack Attached to	---	Core Shop-I	Core Shop-II	Core Shop-III	Core Cleaning & Dusting-II
04	Air Pollution Control Measures	---	---	---	---	Bag Filter
05	Stack Height	Meter	30	30	30	30
06	Stack Diameter	Meter	0.584	0.58	0.584	0.6
07	Stack Temperature	°C	41	39	33	33
08	Ambient Temperature	°C	31	31	30	30
09	Average Velocity of Flue Gases	m/sec.	6.3	9.2	4.2	9.2
10	Isokinetic flow rate for P.M. Sampling	LPM	11	17	8	17
11	Gaseous Sampling Flow Rate	LPM	2.0	2.0	2.0	2.0
12	Permissible limits for PM	mg/Nm <sup>3</sup>	150	150	150	150
13	Measured Concentration of PM	mg/Nm <sup>3</sup>	17.2	15.8	13	26
14	Permissible limits for SO <sub>2</sub>	mg/Nm <sup>3</sup>	40	40	40	40
15	Measured Concentration of SO <sub>2</sub>	mg/Nm <sup>3</sup>	5.1	4.8	3.5	ND
16	Permissible limits for NO <sub>x</sub>	mg/Nm <sup>3</sup>	25	25	25	25
17	Measured Concentration of NO <sub>x</sub>	mg/Nm <sup>3</sup>	8.2	6.5	7.9	6.3

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 Done On. : 13/09/2018

ND= Not Detectable

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Ref. No. : 218/08/2019-20

Date : 31/08/2019

### 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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	S - 25	S - 31	S - 36
01	Date of Sampling	---	19/08/2019	23/08/2019	23/08/2019
02	Time of sampling	Hr.	10.30	9.30	11.30
03	Stack Attached to	---	Zn Coating - I	Zn Coating - II	Zn Coating - III
04	Air Pollution Control Measures	---	Cyclone Seprater & Bag Filter	Cyclone Seprater & Bag Filter	Cyclone Seprater & Bag Filter
05	Stack Height	Meter	30	30	30
06	Stack Diameter	Meter	0.6	0.6	0.6
07	Stack Temperature	°C	32	34	33
08	Ambient Temperature	°C	31	30	30
09	Average Velocity of Flue Gases	m/sec.	4.65	7.45	7.7
10	Isokinetic flow rate for P.M. Sampling	LPM	9	14	11
11	Gaseous Sampling Flow Rate	LPM	---	---	---
12	Permissible limits for PM	mg/Nm <sup>3</sup>	20 (Zn)	20 (Zn)	20 (Zn)
13	Measured Concentration of PM	mg/Nm <sup>3</sup>	14.5	16.1	17.5
14	Permissible limits for SO <sub>2</sub>	mg/Nm <sup>3</sup>	NA	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	NA
17	Measured Concentration of NO <sub>x</sub>	mg/Nm <sup>3</sup>	---	---	---

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 Done On. : 13/09/2018

NA=Not Applicable

NA=Not Applicable



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Ref. No. : 219/08/2019-20

Date : 31/08/2019

### 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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	S - 29	S - 24	S - 23	S - 19
01	Date of Sampling	---	29/08/2019	19/08/2019	19/08/2019	29/08/2019
02	Time of sampling	Hr.	11.35	10.40	14.30	10.30
03	Stack Attached to	---	Annealing Furnace -1	Common Stack Mg Converter-I & II	Sand Reclamation	Annealing Furnace - II
04	Air Pollution Control Measures	---	---	Bag Filter	Bag Filter	---
05	Stack Height	Meter	32	30	30	32
06	Stack Diameter	Meter	1.375	0.5	0.9	1.375
07	Stack Temperature	°C	118	52	81	95
08	Ambient Temperature	°C	31	31	31	31
09	Average Velocity of Flue Gases	m/sec.	5.55	8.8	7.15	6.2
10	Isokinetic flow rate for P.M. Sampling	LPM	8	15	11	10
11	Gaseous Sampling Flow Rate	LPM	2.0	---	2.0	2.0
12	Permissible limits for PM	mg/Nm <sup>3</sup>	150	150	150	150
13	Measured Concentration of PM	mg/Nm <sup>3</sup>	8.5	55.3	30.5	10.5
14	Permissible limits for SO <sub>2</sub>	mg/Nm <sup>3</sup>	100 (PPM)	40	40	100 (PPM)
15	Measured Concentration of SO <sub>2</sub>	mg/Nm <sup>3</sup>	2.3	ND	3.8	1.5
16	Permissible limits for NO <sub>x</sub>	mg/Nm <sup>3</sup>	50 (PPM)	25	25	50 (PPM)
17	Measured Concentration of NO <sub>x</sub>	mg/Nm <sup>3</sup>	9.7	4.8	18	9.1 (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 Done On. : 13/09/2018

N.D= Not Detectable

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Ref. No. : 220/08/2019-20

Date : 31/08/2019

### 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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	S - 58	S - 2	S - 62	S - 63	S - 29	S - 65
01	Date of Sampling	---	29/08/19	28/08/19	21/08/19	21/08/19	28/08/19	22/08/19
02	Time of sampling	Hr.	10.30	11.30	12.45	14.30	10.35	15.20
03	Stack Attached to	---	Magnesium Treatment	Socket Cleaning	Zinc Coating	Tri- Grinding Section	Annealing Furnace -1	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	30	30	32	30
06	Stack Diameter	Meter	1.00	0.50	1.00	1.00	1.375	1.20
07	Stack Temperature	°C	45	32	38	34	105	36
08	Ambient Temperature	°C	31	31	31	31	31	30
09	Average Velocity of Flue Gases	m/sec	7.84	7.11	5.85	2.50	6.85	5.15
10	Isokinetic flow rate for PM Sampling	LPM	14	13	11	5	10	9
11	Gaseous Sampling Flow Rate	LPM	---	---	---	---	2.0	---
12	Permissible limits for PM	mg/Nm <sup>3</sup>	50	50	50 (Zn)	50	150	50 (Zn)
13	Measured Concentration of PM	mg/Nm <sup>3</sup>	18.3	22.5	18.7	34.3	8.3	16
14	Permissible limits for SO <sub>2</sub>	PPM	NA	NA	NA	NA	100 (PPM)	NA
15	Measured Concentration of SO <sub>2</sub>	PPM	---	---	---	---	4.2	---
16	Permissible limits for NO <sub>x</sub>	PPM	NA	NA	NA	NA	50 (PPM)	NA
17	Measured Concentration of NO <sub>x</sub>	PPM	---	---	---	---	14.6	---

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 Done On. : 13/09/2018

ND= Not Detectable

N.A= Not Applicable

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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-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 :20th August, 2019

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	1.1-1.9	1.50	10	Gravimetric	5	---	<i>Bharat Kalsariya</i>	Mr. Bharat Kalsariya

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

Calibration Done on. : 11/03/2019

For. Royal Environment Auditing &amp; Consultancy Service



*Bhadradeja*  
 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 : 20th August, 2019

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	Sinter Plant-1 (Sinter Machine area)	Total Dust	Personal Respirable Dust sampler VPDS 203	02	1.1-2.2	1.7	10	Gravimetric	3	----	<i>Bharat Kalsariya</i>	Mr. Bharat Kalsariya

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

Calibration Done on. : 11/03/2019



For. Royal Environment Auditing &amp; Consultancy Service

*Vaibhav*  
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.: **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 : 21st August, 2019

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	02	3-7	5 (ppm)	50 (ppm)	Gravimetric	6				Mr. Bharat Kalsariya
		Total Dust		1.6-2.3	1.95	10						

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

Calibration Done on. : 11/03/2019



For. Royal Environment Auditing & Consultancy Service

  
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Ref. No. : 224/08/2019-20

Date : 31/08/2019

## 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 : 23rd to 24th August, 2019

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	1.4-2.0	1.80	10	Gravimetric	3			Mr. Bharat Kalsariya
2	DISP Plan (CCM Area)	Total Dust		02	1.8-2.2	2.00	10	Gravimetric	5			

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

Calibration Done on : 11/03/2019

For. Royal Environment Auditing & Consultancy Service



*(Signature)*  
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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 : 21st August, 2019

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	4.4-5.8	5.1	50 (ppm)	Gravimetric	6	-----		Mr. Bharat Kalsariya
		Total Dust			1.5-2.2	1.85	10					

Instruments used : Vaibhav make personal sampler, Model No. VPDS 203  
Calibration Done on. : 11/03/2019

For. Royal Environment Auditing &amp; Consultancy Service


  
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Ref. No. : 228/08/2019-20

Date : 31/08/2019

### 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 : 31st August, 2019

Sr. No.	Location of Sampling	Value in dB(A)		
		Min.	Max.	Leq
1	Inside Control Room	46.2	63.4	55.7
2	Near Flux Crushing Building	51.3	64.8	61.5
3	Sinter Machine area	45.2	59.4	54.3

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.

Calibration Done On. : 13/09/2018



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*Bhurat*  
Analyst



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Ref. No. : 229/08/2019-20

Date : 31/08/2019

### 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 : 31st August, 2019

Sr. No.	Location of Sampling	Value in dB(A)		
		Min.	Max.	Leq
01.	Stock House	57.4	74.7	68.3
02.	Inside BF Control Room	53.6	54.9	54.1
03.	Cast House	46.2	64.2	57.6
04.	Inside Laboratory	41.3	54.1	53.4
05.	Inside Control Room of Blower House	51.8	57.6	53.7
06.	Inside Control Room of CPP	45.7	58.4	54.2

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.

Calibration Done On. : 13/09/2018

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Ref. No. : 230/08/2019-20

Date : 31/08/2019

### 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 : 31st August, 2019

Sr. No.	Location of Sampling	Value in dB(A)		
		Min.	Max.	Leq
01.	Inside Control Room of Annealing Furnace of DISP	41.3	53.2	51.3
02	Inside Control Room – Mill Area of Spiral Plant	53.6	61.8	58.6
03	JCO Plant- Finishing area	47.1	53.2	52.1
04	Nr. CCM area of DISP Plant	53.9	62.7	54.7
05	Nr. CCM area of SDP-2	55.4	71.5	69.2
06	Inside Control Room of Annealing Furnace of SDP-2	73.1	80.6	75.4
07	Control room of DISP Cement Lining	55.9	61.4	58.8
08	Zinc Coating of FL-7 control room	62.4	76.5	71.5
09	Control room of IFBE Coating Plant	53.8	73.3	65.9
10	Mould Shop control room	61.5	75.7	67.0

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.

Calibration Done On. : 13/09/2018

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

Ref. No. : 231/08/2019-20

Date : 31/08/2019

### 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 : 31st August, 2019

Sr. No.	Location of Sampling	Value in dB(A)		
		Min.	Max.	Leq
01.	Inside BF Control Room	43.1	64.2	59.7
02.	Stock House	53.3	66.6	62.9
03.	Cast House	52.5	65.4	58.5

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.

Calibration Done On. : 13/09/2018

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*Bhavin*  
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Ref. No. : 232/08/2019-20

Date : 31/08/2019

### WORK ZONE NOISE LEVEL MEASUREMENT SINTER PLANT - 2 (29017)

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

Date of sampling : 31st August, 2019

Sr. No.	Location of Sampling	Value in dB(A)		
		Min.	Max.	Leq
01.	Inside Control Room	44.9	69.2	57.1
02.	Sinter Machine area	46.7	68.4	53.3
03.	Near Proportioning Building	51.5	66.8	62.4
04.	Near Crusher House	54.3	71.6	65.2

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.

Calibration Done On. : 13/09/2018



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Ref. No. : 233/08/2019-20

Date : 31/08/2019

### AMBIENT NOISE LEVEL MEASUREMENT

Name of company : JINDAL SAW LIMITED,

Village: Samaghogha,

Tal. : Mundra, Dist. Kutch

Date of sampling : 31st August, 2019

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	43.1	58.3	57.6	43.1	71.3	55.3
02.	OHC	45.3	61.6	55.1	42.6	61.4	54.2
03.	New Colony (School)	43.5	57.4	52.8	43.5	55.9	52.1
04.	Behind FL-7	54.7	67.3	58.4	54.7	64.5	57.3
05.	Nr. Sinter Plant-1 Canteen	61.9	74.8	62.3	52.6	51.4	64.0
06.	Blast Furnace RMHS	51.2	64.1	61.6	57.2	63.2	65.9
07.	Spiral-2-Behind work shop	53.4	62.9	59.7	48.4	60.6	61.4
08.	Chairman Bungalow	56.6	63.5	57.1	41.6	52.5	52.8
09.	301 Yard	55.8	63.8	62.8	54.2	65.4	63.7
10.	Guest House	46.2	63.4	54.5	51.7	62.9	48.2
11	Harvesting pond	53.1	67.6	58.6	53.9	65.1	55.6

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.

Calibration Done On. : 13/09/2018

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Ref. No. : 234/08/2019-20

Date : 31/08/2019

### 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 : 29/08/2019

Test Method : As per IS Standards - 3025

NABL Certificate No. : TC 5948

Sr. No.	Parameters	Unit	GPCB limits for Treated Effluent	Raw Sewage	Treated Effluent
01.	pH	pH Unit	6.5 to 9.0	7.65	7.98
02.	BOD (3 Days at 27°C)	mg/l	30	120	9
03.	Total Dissolve Solid	mg/l	...	1702	1650
04.	COD	mg/l	...	163	16
05.	Total Suspended Solid	mg/l	100	114	10
06.	Oil & Grease	mg/l	...	ND	ND
07.	Fecal Coliform #	MPN/100ml	1000	NA	Absent
08.	Residual Chlorine #	mg/l	Min. 0.5	NA	0.56

# Parameters are not covered in NABL Scope

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Ref. No. : 235/08/2019-20

Date : 31/08/2019

### 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 : 29/08/2019

*NABL Certificate No. : TC 5948*

Sr. No.	Parameters	Unit	Permissible limit	Results
01.	pH	...	6.5 to 8.5	6.87
02.	Colour	pt.co.units	100	8
03.	Temperature	°C	40	32
04.	Total suspended solids	mg/l	100	11
05.	Total dissolve solids	mg/l	2100	1640
06.	Phenolic compounds	mg/l	1	ND
07.	Oil & Grease	mg/l	10	ND
08.	Chlorides	mg/l	600	546
09.	Sulphate	mg/l	1000	126.5
10.	Ammonical nitrogen (as NH <sub>3</sub> -N)	mg/l	50	6.2
11.	BOD (3 Days at 27°C)	mg/l	30	14.5
12.	COD	mg/l	100	52.6

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