



# Royal

## Environment Auditing & Consultancy Service

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

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Ref No : 02/06/2013-14

Date: 28/06/2013

### AMBIENT AIR QUALITY MONITORING REPORT

Name of company Jindal Saw Limited,  
Village: Samaghogha  
Tal. : Mundra, Dist. Kutch

Test Method As per IS Standards - 5182\_2/4/6

Sr. No.	Particulars	Unit	NAAQMS - 1	NAAQMS - 2	NAAQMS - 3
01.	Location of Ambient	----	Main Gate (S)	Sinter Plant - 1 (NNW)	Nr. Workshop Spiral - II (W)
02.	Date of sampling	----	05/06/2013	05/06/2013	05/06/2013
03.	Time of sampling	----	8.50	9.25	9.55
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	----	W	W	W
06.	Average Wind Speed	Km/Hr.	3 to 11	3 to 11	3 to 11
07.	Average flow rate during sampling	m3/Hr.	1.0	1.0	1.0
08.	Average flow rate for Gas sampling	LPM	0.2	0.2	0.2
09.	<b>Permissible limits for PM 10</b>	<b>µg/m3</b>	<b>100</b>	<b>100</b>	<b>100</b>
10.	Measured Concentration of PM 10	µg/m3	37	40	34
11.	<b>Permissible limits for PM 2.5</b>	<b>µg/m3</b>	<b>60</b>	<b>60</b>	<b>60</b>
12.	Measured Concentration of PM 2.5	µg/m3	23	29	21
13.	<b>Permissible limits for SO2</b>	<b>µg/m3</b>	<b>80</b>	<b>80</b>	<b>80</b>
14.	Measured Concentration of SO2	µg/m3	12.3	13.2	11.1
15.	<b>Permissible limits for NO2</b>	<b>µg/m3</b>	<b>80</b>	<b>80</b>	<b>80</b>
16.	Measured Concentration of NO2	µg/m3	22.2	23.4	20.9
17.	<b>Permissible limit for CO **</b>	<b>µg/m3</b>	<b>2000</b>	<b>2000</b>	<b>2000</b>
18.	Measured Concentration of CO	µg/m3	240	285	225

Instrument used : (1) Envirotech make 1 No. of RDS (APM - 460 BL) (2) 1 No. of Gaseous Sampling Kit (APM 411) (3) Ecotech make Attachment of 1 No. of PM 2.5 Sampler (AAS 127) (4) Ecotech make 2 Nos. of RDS (AAS 217 BL) (5) Gaseous sampling attachment (AAS 109) (6) Ecotech make 2 Nos. of PM 2.5 sampler (AAS 127)

Calibration due on: (1) 05/05/2014 (2) 05/05/2014 (3) 04/05/2014 (4) 06/05/2014 (5) 05/05/2014 (6) 06/05/2014

Royal Environment Auditing & Consultancy Service



*M. Manoj*  
Analyst



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Ref No. : 03/06/2013-14

Date 28/06/2013

### AMBIENT AIR QUALITY MONITORING REPORT

Name of company : Jindal Saw Limited,

Village: Samaghogha,

Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 5182\_2/4/6

Sr. No.	Particulars	Unit	NAAQMS - 1	NAAQMS - 2	NAAQMS - 3
01.	Location of Ambient	---	Main Gate (S)	Sinter Plant - 1 (NNW)	Nr. Workshop Spiral - II (W)
02.	Date of sampling	---	06/06/2013	06/06/2013	06/06/2013
03.	Time of sampling	---	9.00	9.30	10.00
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	----	W	W	W
06.	Average Wind Speed	Km/Hr.	4 to 13	4 to 13	4 to 13
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.	<b>Permissible limits for PM 10</b>	<b>µg/m<sup>3</sup></b>	<b>100</b>	<b>100</b>	<b>100</b>
10.	Measured Concentration of PM 10	µg/m <sup>3</sup>	43	46	37
11.	<b>Permissible limits for PM 2.5</b>	<b>µg/m<sup>3</sup></b>	<b>60</b>	<b>60</b>	<b>60</b>
12.	Measured Concentration of PM 2.5	µg/m <sup>3</sup>	24	27	20
13.	<b>Permissible limits for SO<sub>2</sub></b>	<b>µg/m<sup>3</sup></b>	<b>80</b>	<b>80</b>	<b>80</b>
14.	Measured Concentration of SO <sub>2</sub>	µg/m <sup>3</sup>	11.8	12.7	11.3
15.	<b>Permissible limits for NO<sub>2</sub></b>	<b>µg/m<sup>3</sup></b>	<b>80</b>	<b>80</b>	<b>80</b>
16.	Measured Concentration of NO <sub>2</sub>	µg/m <sup>3</sup>	22.6	23.9	21.3
17.	<b>Permissible limit for CO **</b>	<b>µg/m<sup>3</sup></b>	<b>2000</b>	<b>2000</b>	<b>2000</b>
18.	Measured Concentration of CO	µg/m <sup>3</sup>	246	276	234

Instrument used : (1) Envirotech make 1 No. of RDS (APM - 460 BL) (2) 1 No. of Gaseous Sampling Kit (APM 411) (3) Ecotech make Attachment of 1 No. of PM 2.5 Sampler (AAS 127) (4) Ecotech make 2 Nos. of RDS (AAS 217 BL) (5) Gaseous sampling attachment (AAS 109) (6) Ecotech make 2 Nos. of PM 2.5 sampler (AAS 127)

Calibration due on: (1) 05/05/2014 (2) 05/05/2014 (3) 04/05/2014 (4) 06/05/2014 (5) 05/05/2014 (6) 06/05/2014

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Ref. No. : 04/06/2013-14

Date: 28/06/2013

### AMBIENT AIR QUALITY MONITORING REPORT

Name of company : Jindal Saw Limited,  
Village: Samaghogha,  
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 5182\_2/4/6

Sr. No.	Particulars	Unit	NAAQMS - 1	NAAQMS - 2	NAAQMS - 3
01.	Location of Ambient	----	Main Gate (S)	Sinter Plant - 1 (NNW)	Nr. Workshop Spiral - II (W)
02.	Date of sampling	----	12/06/2013	12/06/2013	12/06/2013
03.	Time of sampling	----	9.00	9.30	10.00
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	----	SE	SE	SE
06.	Average Wind Speed	Km/Hr.	3 to 11	3 to 11	3 to 11
07.	Average flow rate during sampling	m3/Hr.	1.0	1.0	1.0
08.	Average flow rate for Gas sampling	LPM	0.2	0.2	0.2
09.	<b>Permissible limits for PM 10</b>	<b>µg/m3</b>	<b>100</b>	<b>100</b>	<b>100</b>
10.	Measured Concentration of PM 10	µg/m3	38	43	35
11.	<b>Permissible limits for PM 2.5</b>	<b>µg/m3</b>	<b>60</b>	<b>60</b>	<b>60</b>
12.	Measured Concentration of PM 2.5	µg/m3	26	31	23
13.	<b>Permissible limits for SO2</b>	<b>µg/m3</b>	<b>80</b>	<b>80</b>	<b>80</b>
14.	Measured Concentration of SO2	µg/m3	12.1	13.5	11.5
15.	<b>Permissible limits for NO2</b>	<b>µg/m3</b>	<b>80</b>	<b>80</b>	<b>80</b>
16.	Measured Concentration of NO2	µg/m3	20.9	21.2	20.2
17.	<b>Permissible limit for CO **</b>	<b>µg/m3</b>	<b>2000</b>	<b>2000</b>	<b>2000</b>
18.	Measured Concentration of CO	µg/m3	239	259	227

Instrument used : (1) Envirotech make 1 No. of RDS (APM - 460 BL) (2) 1 No. of Gaseous Sampling Kit (APM 411) (3) Ecotech make Attachment of 1 No. of PM 2.5 Sampler (AAS 127) (4) Ecotech make 2 Nos. of RDS (AAS 217 BL) (5) Gaseous sampling attachment (AAS 109) (6) Ecotech make 2 Nos. of PM 2.5 sampler (AAS 127)

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Ref. No : 05/06/2013-14

Date 28/06/2013

### AMBIENT AIR QUALITY MONITORING REPORT

Name of company : Jindal Saw Limited,  
Village: Samaghogha,  
Tal. : Mundra, Dist. Kutch

Test Method As per IS Standards - 5182\_2/4/6

Sr. No.	Particulars	Unit	NAAQMS - 1	NAAQMS - 2	NAAQMS - 3
01.	Location of Ambient	----	Main Gate (S)	Sinter Plant - 1 (NNW)	Nr. Workshop Spiral - II (W)
02.	Date of sampling	----	13/06/2013	13/06/2013	13/06/2013
03.	Time of sampling	----	9.10	9.35	10.10
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	----	SSW	SSW	SSW
06.	Average Wind Speed	Km/Hr	5 to 13	5 to 13	5 to 13
07.	Average flow rate during sampling	m3/Hr.	1.0	1.0	1.0
08.	Average flow rate for Gas sampling	LPM	0.2	0.2	0.2
09.	<b>Permissible limits for PM 10</b>	<b>µg/m3</b>	<b>100</b>	<b>100</b>	<b>100</b>
10.	Measured Concentration of PM 10	µg/m3	36	42	34
11.	<b>Permissible limits for PM 2.5</b>	<b>µg/m3</b>	<b>60</b>	<b>60</b>	<b>60</b>
12.	Measured Concentration of PM 2.5	µg/m3	29	32	22
13.	<b>Permissible limits for SO2</b>	<b>µg/m3</b>	<b>80</b>	<b>80</b>	<b>80</b>
14.	Measured Concentration of SO2	µg/m3	12.5	13.1	11.8
15.	<b>Permissible limits for NO2</b>	<b>µg/m3</b>	<b>80</b>	<b>80</b>	<b>80</b>
16.	Measured Concentration of NO2	µg/m3	21.1	22.1	20.6
17.	<b>Permissible limit for CO **</b>	<b>µg/m3</b>	<b>2000</b>	<b>2000</b>	<b>2000</b>
18.	Measured Concentration of CO	µg/m3	242	267	224

Instrument used : (1) Envirotech make 1 No. of RDS (APM - 460 BL) (2) 1 No. of Gaseous Sampling Kit (APM 411) (3) Ecotech make Attachment of 1 No. of PM 2.5 Sampler (AAS 127) (4) Ecotech make 2 Nos. of RDS (AAS 217 BL) (5) Gaseous sampling attachment (AAS 109) (6) Ecotech make 2 Nos. of PM 2.5 sampler (AAS 127)

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Ref No. : 06/06/2013-14

Date 28/06/2013

### AMBIENT AIR QUALITY MONITORING REPORT

Name of company : Jindal Saw Limited.

Village: Samaghogha,

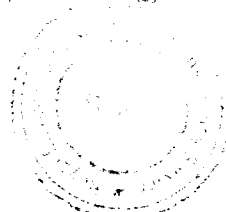
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 5182\_2/4/6

Sr. No.	Particulars	Unit	NAAQMS - 1	NAAQMS - 2	NAAQMS - 3
01.	Location of Ambient	----	Main Gate (S)	Sinter Plant - 1 (NNW)	Nr. Workshop Spiral - II (W)
02.	Date of sampling	----	19/06/2013	19/06/2013	19/06/2013
03.	Time of sampling	----	8.55	9.30	10.00
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	----	W	W	W
06.	Average Wind Speed	Km/Hr.	3 to 10	3 to 10	3 to 10
07.	Average flow rate during sampling	m3/Hr.	1.0	1.0	1.0
08.	Average flow rate for Gas sampling	LPM	0.2	0.2	0.2
09.	<b>Permissible limits for PM 10</b>	<b>µg/m3</b>	<b>100</b>	<b>100</b>	<b>100</b>
10.	Measured Concentration of PM 10	µg/m3	37	41	35
11.	<b>Permissible limits for PM 2.5</b>	<b>µg/m3</b>	<b>60</b>	<b>60</b>	<b>60</b>
12.	Measured Concentration of PM 2.5	µg/m3	28	32	25
13.	<b>Permissible limits for SO2</b>	<b>µg/m3</b>	<b>80</b>	<b>80</b>	<b>80</b>
14.	Measured Concentration of SO2	µg/m3	12.3	12.9	11.3
15.	<b>Permissible limits for NO2</b>	<b>µg/m3</b>	<b>80</b>	<b>80</b>	<b>80</b>
16.	Measured Concentration of NO2	µg/m3	21.6	22.3	20.9
17.	<b>Permissible limit for CO **</b>	<b>µg/m3</b>	<b>2000</b>	<b>2000</b>	<b>2000</b>
18.	Measured Concentration of CO	µg/m3	249	277	238

Instrument used : (1) Envirotech make 1 No. of RDS (APM - 460 BL) (2) 1 No. of Gaseous Sampling Kit (APM 411) (3) Ecotech make Attachment 1 No. of PM 2.5 Sampler (AAS 127) (4) Ecotech make 2 Nos. of RDS (AAS 217 BL) (5) Gaseous sampling attachment (AAS 109) (6) Ecotech make 2 Nos. of PM 2.5 sampler (AAS 127)

Calibration due on: (1) 05/05/2014 (2) 05/05/2014 (3) 04/05/2014 (4) 06/05/2014 (5) 05/05/2014 (6) 06/05/2014



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Ref. No. : 07/06/2013-14

Date: 28/06/2013

### AMBIENT AIR QUALITY MONITORING REPORT

Name of company : Jindal Saw Limited,  
Village: Samaghogha,  
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 5182\_2/4/6

Sr. No.	Particulars	Unit	NAAQMS - 1	NAAQMS - 2	NAAQMS - 3
01.	Location of Ambient	----	Main Gate (S)	Sinter Plant - 1 (NNW)	Nr. Workshop Spiral - II (W)
02.	Date of sampling	----	20/06/2013	20/06/2013	20/06/2013
03.	Time of sampling	----	9.00	9.40	10.05
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	----	W	W	W
06.	Average Wind Speed	Km/Hr.	2 to 11	2 to 11	2 to 11
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.	<b>Permissible limits for PM 10</b>	<b>µg/m<sup>3</sup></b>	<b>100</b>	<b>100</b>	<b>100</b>
10.	Measured Concentration of PM 10	µg/m <sup>3</sup>	39	47	34
11.	<b>Permissible limits for PM 2.5</b>	<b>µg/m<sup>3</sup></b>	<b>60</b>	<b>60</b>	<b>60</b>
12.	Measured Concentration of PM 2.5	µg/m <sup>3</sup>	30	33	26
13.	<b>Permissible limits for SO<sub>2</sub></b>	<b>µg/m<sup>3</sup></b>	<b>80</b>	<b>80</b>	<b>80</b>
14.	Measured Concentration of SO <sub>2</sub>	µg/m <sup>3</sup>	12.8	13.0	12.1
15.	<b>Permissible limits for NO<sub>2</sub></b>	<b>µg/m<sup>3</sup></b>	<b>80</b>	<b>80</b>	<b>80</b>
16.	Measured Concentration of NO <sub>2</sub>	µg/m <sup>3</sup>	21.2	22.0	20.1
17.	<b>Permissible limit for CO **</b>	<b>µg/m<sup>3</sup></b>	<b>2000</b>	<b>2000</b>	<b>2000</b>
18.	Measured Concentration of CO	µg/m <sup>3</sup>	244	268	230

Instrument used : (1) Envirotech make 1 No. of RDS (APM - 460 BL) (2) 1 No. of Gaseous Sampling Kit (APM 411) (3) Ecotech make Attachment 1 No. of PM 2.5 Sampler (AAS 127) (4) Ecotech make 2 Nos. of RDS (AAS 217 BL) (5) Gaseous sampling attachment (AAS 109) (6) Ecotech make 2 Nos. of PM 2.5 sampler (AAS 127)

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Ref No : 08/06/2013-14

Date: 28/06/2013

### AMBIENT AIR QUALITY MONITORING REPORT

Name of company : Jindal Saw Limited,  
Village: Samaghogha,  
Tal. : Mundra, Dist. Kutch

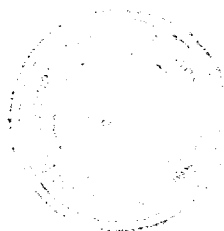
Test Method : As per IS Standards - 5182\_2/4/6

Sr. No.	Particulars	Unit	NAAQMS - 1	NAAQMS - 2	NAAQMS - 3
01.	Location of Ambient	----	Main Gate (S)	Sinter Plant - 1 (NNW)	Nr. Workshop Spiral - II (W)
02.	Date of sampling	----	26/06/2013	26/06/2013	26/06/2013
03.	Time of sampling	----	8.50	9.25	10.00
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	----	WSW	WSW	WSW
06.	Average Wind Speed	Km/Hr.	6 to 14	6 to 14	6 to 14
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.	<b>Permissible limits for PM 10</b>	<b>µg/m<sup>3</sup></b>	<b>100</b>	<b>100</b>	<b>100</b>
10.	Measured Concentration of PM 10	µg/m <sup>3</sup>	44	48	41
11.	<b>Permissible limits for PM 2.5</b>	<b>µg/m<sup>3</sup></b>	<b>60</b>	<b>60</b>	<b>60</b>
12.	Measured Concentration of PM 2.5	µg/m <sup>3</sup>	31	34	29
13.	<b>Permissible limits for SO<sub>2</sub></b>	<b>µg/m<sup>3</sup></b>	<b>80</b>	<b>80</b>	<b>80</b>
14.	Measured Concentration of SO <sub>2</sub>	µg/m <sup>3</sup>	11.9	12.2	11.2
15.	<b>Permissible limits for NO<sub>2</sub></b>	<b>µg/m<sup>3</sup></b>	<b>80</b>	<b>80</b>	<b>80</b>
16.	Measured Concentration of NO <sub>2</sub>	µg/m <sup>3</sup>	20.1	21.5	19.3
17.	<b>Permissible limit for CO **</b>	<b>µg/m<sup>3</sup></b>	<b>2000</b>	<b>2000</b>	<b>2000</b>
18.	Measured Concentration of CO	µg/m <sup>3</sup>	248	260	223

Instrument used : (1) Envirotech make 1 No. of RDS (APM - 460 BL) (2) 1 No. of Gaseous Sampling Kit (APM 411) (3) Ecotech make Attachment of 1 No. of PM 2.5 Sampler (AAS 127) (4) Ecotech make 2 Nos. of RDS (AAS 217 BL) (5) Gaseous sampling attachment (AAS 109) (6) Ecotech make 2 Nos. of PM 2.5 sampler (AAS 127)

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Ref No. 09/06/2013-14

Date 28/06/2013

### AMBIENT AIR QUALITY MONITORING REPORT

Name of company : Jindal Saw Limited,  
Village: Samaghogha,  
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 5182\_2/4/6

Sr. No.	Particulars	Unit	NAAQMS - 1	NAAQMS - 2	NAAQMS - 3
01.	Location of Ambient	----	Main Gate (S)	Sinter Plant - 1 (NNW)	Nr. Workshop Spiral - II (W)
02.	Date of sampling	----	27/06/2013	27/06/2013	27/06/2013
03.	Time of sampling	----	9.00	9.30	10.10
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	----	W	W	W
06.	Average Wind Speed	Km/Hr.	5 to 15	5 to 15	5 to 15
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.	<b>Permissible limits for PM 10</b>	<b>µg/m<sup>3</sup></b>	<b>100</b>	<b>100</b>	<b>100</b>
10.	Measured Concentration of PM 10	µg/m <sup>3</sup>	39	42	36
11.	<b>Permissible limits for PM 2.5</b>	<b>µg/m<sup>3</sup></b>	<b>60</b>	<b>60</b>	<b>60</b>
12.	Measured Concentration of PM 2.5	µg/m <sup>3</sup>	25	29	23
13.	<b>Permissible limits for SO<sub>2</sub></b>	<b>µg/m<sup>3</sup></b>	<b>80</b>	<b>80</b>	<b>80</b>
14.	Measured Concentration of SO <sub>2</sub>	µg/m <sup>3</sup>	12.3	12.9	11.7
15.	<b>Permissible limits for NO<sub>2</sub></b>	<b>µg/m<sup>3</sup></b>	<b>80</b>	<b>80</b>	<b>80</b>
16.	Measured Concentration of NO <sub>2</sub>	µg/m <sup>3</sup>	20.6	22.7	19.6
17.	<b>Permissible limit for CO **</b>	<b>µg/m<sup>3</sup></b>	<b>2000</b>	<b>2000</b>	<b>2000</b>
18.	Measured Concentration of CO	µg/m <sup>3</sup>	238	253	220

Instrument used : (1) Envirotech make 1 No. of RDS (APM - 460 BL) (2) 1 No. of Gaseous Sampling Kit (APM 411) (3) Ecotech make Attachment of 1 No. of PM 2.5 Sampler (AAS 127) (4) Ecotech make 2 Nos. of RDS (AAS 217 BL) (5) Gaseous sampling attachment (AAS 109) (6) Ecotech make 2 Nos. of PM 2.5 sampler (AAS 127)

Calibration due on: (1) 05/05/2014 (2) 05/05/2014 (3) 04/05/2014 (4) 06/05/2014 (5) 05/05/2014 (6) 06/05/2014

Royal Environment Auditing & Consultancy Service



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Ref. No. : 10/06/2013-14

Date: 28/06/2013

### AMBIENT AIR QUALITY MONITORING REPORT

Name of company : Jindal Saw Limited.  
Village: Samaghogha,  
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 5182\_2/4/6

Sr.No.	Particulars	Unit	AAQM - 1 (S)	AAQM - 2 (SSW)	AAQM - 3 (WSW)	AAQM - 4 (NW)
01.	Location of Ambient	----	Old Colony (Nr. Environment Laboratory)	Nr. Rain Water Harvesting	LPG Yard (Nr. Water Reservoir)	Between Sinter - 2 & Spiral - 2
02.	Date of sampling	----	03/06/2013	04/06/2013	06/06/2013	07/06/2013
03.	Time of sampling	----	8.55	9.05	10.30	9.10
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	----	SSW	W	W	W
06.	Average Wind Speed	Km/Hr.	4 to 15	3 to 14	5 to 13	4 to 14
07.	Average flow rate during sampling	m3/Hr.	1.0	1.0	1.0	1.0
08.	Average flow rate for Gas sampling	LPM	0.2	0.2	0.2	0.2
09.	<b>Permissible limits for PM 10</b>	<b>µg/m3</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
10.	Measured Concentration of PM 10	µg/m3	45	44	48	49
11.	<b>Permissible limits for PM 2.5</b>	<b>µg/m3</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>60</b>
12.	Measured Concentration of PM 2.5	µg/m3	25	26	23	28
13.	<b>Permissible limits for SO2</b>	<b>µg/m3</b>	<b>80</b>	<b>80</b>	<b>80</b>	<b>80</b>
14.	Measured Concentration of SO2	µg/m3	11.8	12.3	11.4	13.1
15.	<b>Permissible limits for NO2</b>	<b>µg/m3</b>	<b>80</b>	<b>80</b>	<b>80</b>	<b>80</b>
16.	Measured Concentration of NO2	µg/m3	18.9	19.7	20.9	20.5
17.	<b>Permissible limit for CO **</b>	<b>µg/m3</b>	<b>2000</b>	<b>2000</b>	<b>2000</b>	<b>2000</b>
18.	Measured Concentration of CO	µg/m3	235	221	237	245

Instrument used : (1) Envirotech make 2 Nos. RDS (APM - 460 BL) (2) 2 Nos. Gaseous Sampling Kit (APM 411)

(3) Ecotech make Attachment of 2 Nos. PM 2.5 Sampler (AAS 127)

Calibration due on: (1) 05/05/2014 (2) 05/05/2014 (3) 04/05/2014



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Ref No. : 11/06/2013-14

Date: 28/06/2013

### AMBIENT AIR QUALITY MONITORING REPORT

Name of company : Jindal Saw Limited,  
Village: Samaghogha,  
Tal. : Mundra, Dist. Kutch

Test Method As per IS Standards - 5182\_2/4/6

Sr. No.	Particulars	Unit	AAQM - 5 (NE)	AAQM - 6 (SE)	AAQM - 7 (SSE)	AAQM - 8 (E)
01.	Location of Ambient	----	Labour Colony	New Colony (Shopping Centre )	Admin Building	Weigh bridge
02.	Date of sampling	----	03/06/2013	04/06/2013	06/06/2013	07/06/2013
03.	Time of sampling	----	9.30	9.40	11.05	9.40
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	----	SSW	W	W	W
06.	Average Wind Speed	Km/Hr.	4 to 15	3 to 14	5 to 13	4 to 14
07.	Average flow rate during sampling	m3/Hr.	1.0	1.0	1.0	1.0
08.	Average flow rate for Gas sampling	LPM	0.2	0.2	0.2	0.2
09.	<b>Permissible limits for PM 10</b>	<b>µg/m3</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
12.	Measured Concentration of PM 10	µg/m3	51	48	53	51
11.	<b>Permissible limits for PM 2.5</b>	<b>µg/m3</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>60</b>
10.	Measured Concentration of PM 2.5	µg/m3	28	30	27	32
13.	<b>Permissible limits for SOx</b>	<b>µg/m3</b>	<b>80</b>	<b>80</b>	<b>80</b>	<b>80</b>
14.	Measured Concentration of SOx	µg/m3	12.5	13.1	12.2	13.5
15.	<b>Permissible limits for Nox</b>	<b>µg/m3</b>	<b>80</b>	<b>80</b>	<b>80</b>	<b>80</b>
16.	Measured Concentration of NOx	µg/m3	20.1	20.8	21.6	20.9
17.	<b>Permissible limit for CO **</b>	<b>µg/m3</b>	<b>2000</b>	<b>2000</b>	<b>2000</b>	<b>2000</b>
18.	Measured Concentration of	µg/m3	237	231	250	253

Instrument used : (1) Envirotech make 2 Nos. RDS (APM - 460 BL) (2) 2 Nos. Gaseous Sampling Kit (APM 411)

(3) Ecotech make Attachment of 2 Nos. PM 2.5 Sampler (AAS 127)

Calibration due on: (1) 05/05/2014 (2) 05/05/2014 (3) 04/05/2014



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Ref No 12/06/2013-14

Date 28/06/2013

### FUGITIVE EMISSION MONITORING REPORT

Name of company : Jindal Saw Limited.  
Village: Samaghogha.  
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 5182\_2/4/6

Sr. No.	Particulars	Unit	A - 1	A - 2	A - 3
01.	Location of Ambient	----	RMH Junction House	RMH Stock House	Sinter RMH Yard
02.	Date of sampling	----	03/06/2013	03/06/2013	04/06/2013
03.	Time of sampling	----	10.05	10.40	10 10
04.	Duration of Sampling	Hr.	8.00	8.00	8.00
05.	Dominant Wind Direction (From)	----	SSW	SSW	W
06.	Average Wind Speed	Km/Hr.	3 to 13	3 to 13	4 to 12
07.	Average flow rate during sampling	m3/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/m3	3000	3000	3000
10.	Measured Concentration of PM 10	µg/m3	2121	2412	18/9
11.	Permissible limits for SO2	µg/m3	150	150	150
12.	Measured Concentration of SO2	µg/m3	13.2	14.3	12.3
13.	Permissible limits for NO2	µg/m3	120	120	120
14.	Measured Concentration of NO2	µg/m3	21.7	22.4	23.1
15.	Permissible limit for CO **	µg/m3	5000	5000	5000
16.	Measured Concentration of CO	µg/m3	263	251	239

Instrument used : (1) Envirotech make 2 Nos. RDS (APM - 460 BL) (2) 2 Nos. Gaseous Sampling Kit (APM 411)  
(3) Ecotech make Attachment of 2 Nos. PM 2.5 Sampler (AAS 127)

Calibration due on: (1) 05/05/2014 (2) 05/05/2014 (3) 04/05/2014

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Ref. No. : 13/06/2013-14

Date: 28/06/2013

### FUGITIVE EMISSION MONITORING REPORT

Name of company : Jindal Saw Limited,

Village: Samaghogha,

Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 5182\_2/4/6

Sr. No.	Particulars	Unit	A - 4	A - 5	A - 6
01.	Location of Ambient	----	Sinter 2 Ground Hopper	DISP	Sinter 1 Main to PMD
02.	Date of sampling	----	04/06/2013	05/06/2013	05/06/2013
03.	Time of sampling	----	10.35	10.35	11.10
04.	Duration of Sampling	Hr.	8.00	8.00	8.00
05.	Dominant Wind Direction (From)	----	W	W	W
06.	Average Wind Speed	Km/Hr.	4 to 12	3 to 11	3 to 11
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.	<b>Permissible limits for PM 10</b>	<b>µg/m<sup>3</sup></b>	<b>3000</b>	<b>3000</b>	<b>3000</b>
10.	Measured Concentration of PM 10	µg/m <sup>3</sup>	1064	1023	2234
11.	<b>Permissible limits for SO<sub>2</sub></b>	<b>µg/m<sup>3</sup></b>	<b>150</b>	<b>150</b>	<b>150</b>
12.	Measured Concentration of SO <sub>2</sub>	µg/m <sup>3</sup>	13.7	13.2	12.1
13.	<b>Permissible limits for NO<sub>2</sub></b>	<b>µg/m<sup>3</sup></b>	<b>120</b>	<b>120</b>	<b>120</b>
14.	Measured Concentration of NO <sub>2</sub>	µg/m <sup>3</sup>	21.2	22.1	20.9
15.	<b>Permissible limit for CO **</b>	<b>µg/m<sup>3</sup></b>	<b>5000</b>	<b>5000</b>	<b>5000</b>
16.	Measured Concentration of CO	µg/m <sup>3</sup>	235	221	237

Instrument used : (1) Envirotech make 2 Nos. RDS (APM - 460 BL) (2) 2 Nos. Gaseous Sampling Kit (APM 411)

(3) Ecotech make Attachment of 2 Nos. PM 2.5 Sampler (AAS 127)

Calibration due on: (1) 05/05/2014 (2) 05/05/2014 (3) 04/05/2014

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Ref No. 14/06/2013-14

Date: 28/06/2013

### Bag Filter Efficiency Report

#### APCM Inlet

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	Stack No. 1	Stack No. 2	Stack No. 3	Stack No. 4	Stack No. 5	Stack No. 6
01	Date of Sampling	---	07/06/2013	07/06/2013	07/06/2013	07/06/2013	07/06/2013	07/06/2013
02	Attached to		Zinc Coating - I	Common stack Mg Converter- I & II	Core Cleaning & Dusting-I	Barrel Grinding - I	Barrel Grinding - II	Sand Reclamation
03	Stack Height	Meter	30	30	30	30	30	32
04	Stack Diameter	Meter	0.488	0.584	0.588	0.584	0.584	
05	Stack Temperature	°C	54	57	49	46	42	54
06	Ambient Temperature	°C	32	34	33	30	36	36
07	Average Velocity of Flue Gases	M/Sec	5.7	7.2	10.2	11.5	13.1	12.8
08	Inlet	mg	1645	1243	1765	1889	1865	1329
09	Outlet	mg	15	30	43	42	43	49
10	Efficiency	%	99.09	97.59	97.56	97.78	97.69	96.31

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

Instrument Used : 2 Nos of Stack Monitoring Kit - Vayubodhan make - VSS I

Both Stack kit have calibration Due on : 05/05/2014

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Ref. No. : 16/06/2013 14

Date: 28/06/2013

### STACK EMISSION MONITORING RESULTS

#### Sinter Plant-I

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	Stack No. 1	Stack No. 2	Stack No. 3	Stack No. 4	Stack No. 5	Stack No. 6
01	Date of Sampling	---	03/06/2013	03/06/2013	03/06/2013	03/06/2013	03/06/2013	03/06/2013
02	Time of sampling	---	11.10	12.20	15.00	15.50	16.30	17.20
03	Stack Attached to	---	Sinter Furnace	Discharge End	Fuel & Flux Crusher and Screening	Fuel & Flux Crushing House	Secondary Mixture House	Primary Mixture House
04	Air Pollution Control Measures	---	ESP	ESP	Bag Filter	Bag Filter	---	---
05	Stack Height	Meter	50	32.8	32.8	27.05	36.08	19.75
06	Stack Diameter	Meter	2.0	1.30	1.40	0.70	1.25	1.25
07	Stack Temperature	°C	131	127	40	59	57	71
08	Ambient Temperature	°C	31	32	36	36	35	34
09	Average Velocity of Flue Gases	M/Sec.	11.8	7.2	6.10	5.9	5.6	5.4
10	Isokinetic flow rate for P.M. Sampling	LPM	16	23	25	23	21	23
11	Gaseous Sampling Flow Rate	LPM	2.0	---	---	---	---	---
12	Permissible limits for PM	mg/Nm <sup>3</sup>	150	150	150	150	150	150
13	Measured Concentration of PM	mg/Nm <sup>3</sup>	41	44	56	46	42	40
14	Permissible limits for SO <sub>2</sub>	ppm	100	NA	NA	NA	NA	NA
15	Measured Concentration of SO <sub>2</sub>	ppm	11.9	---	---	---	---	---
16	Permissible limits for NO <sub>x</sub>	ppm	50	NA	NA	NA	NA	NA
17	Measured Concentration of NO <sub>x</sub>	ppm	7.6	---	---	---	---	---

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

Instrument Used : 2 Nos of Stack Monitoring Kit - Vayubodhan make - VSS I

Both Stack kit have calibration Due on : 05/05/2014

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Ref No. : 17/06/2013/14

Date: 28/05/2013

### STACK EMISSION MONITORING RESULTS

#### Sinter Plant- II

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	Stack No. 1	Stack No. 2	Stack No. 3	Stack No. 4	Stack No. 5	Stack No. 6	Stack No. 7
01	Date of Sampling	---	04/06/2013	04/06/2013	04/06/2013	04/06/2013	04/06/2013	04/06/2013	04/06/2013
02	Time of sampling	Hr.	11.15	12.00	Not Running During Visit	15.00	15.45	16.35	Not Running During Visit
03	Stack Attached to	---	Sinter Furnace	Discharging End of sinter de-dusting system	Fuel crushing de-duster system (Flux)	Primary Mixer De-duster system	Secondary Mixer De-duster system	Fuel Screening deduster System (Flux Screening Stack)	Fuel crushing de-duster system: (Fuel)
04	Air Pollution Control Measures	---	ESP	ESP	Dust Collector	---	---	Dust Collector	Dust Collector
05	Stack Height	Meter	50	50	30	30	30	30	30
06	Stack Diameter	Meter	2	1.3	0.7	1.25	1.25	0.7	0
07	Stack Temperature	°C	126	150	---	57	49	42	---
08	Ambient Temperature	°C	30	32	---	36	35	33	---
09	Average Velocity of Flue Gases	M/Sec.	6.5	7.0	---	6.5	5.9	5.5	---
10	Isokinetic flow rate for P.M. Sampling	LPM	21	21	---	25	23	22	---
11	Gaseous Sampling Flow Rate	LPM	2.0	---	---	---	---	---	---
12	Permissible limits for PM	mg/Nm3	150	150	150	150	150	150	150
13	Measured Concentration of PM	mg/Nm3	32	33	---	42	47	45	---
14	Permissible limits for SO2	ppm	100	NA	NA	NA	NA	NA	NA
15	Measured Concentration of SO2	ppm	12.3	---	---	---	---	---	---
16	Permissible limits for NOx	ppm	50	NA	NA	NA	NA	NA	NA
17	Measured Concentration of NOx	ppm	16.7	---	---	---	---	---	---

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

NA: Not Applicable

Instrument Used : 2 Nos of Stack Monitoring Kit - Vayubodhan make - VSS I

Both Stack kit have calibration Due on : 05/05/2014

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Ref No 18/06/2013-14

Date: 28/06/2013

### STACK EMISSION MONITORING RESULTS

#### BLAST FURNCE & PCI

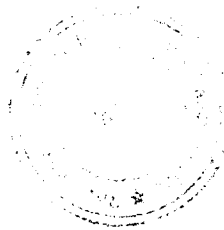
Name of company : Jindal Saw Limited,  
Village: Samaghogha.  
Tal. : Mundra, Dist. Kutch

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

Sr. No	Particulars	Unit	Stack No. 1	Stack No. 2	Stack No. 3	Stack No. 4	Stack No. 5
01	Date of Sampling	---	05/06/2013	05/06/2013	05/06/2013	05/06/2013	05/06/2013
02	Time of sampling	Hr.	11.40	12.30	15.00	15.45	Not Running During Visit
03	Stack Attached to	---	Boiler - I	Boiler - II	Dedusting System	Stove Stack	Coal Pulverization
04	Air Pollution Control Measures	---	---	---	Bag Filter	---	Bag Filter
05	Stack Height	Meter	45	45	35.0	50.0	32.00
06	Stack Diameter	Meter	1.380	1.380	1.484	2.250	---
07	Stack Temperature	°C	152	168	59	305	---
08	Ambient Temperature	°C	32	33	37	37	---
09	Average Velocity of Flue Gases	M/Sec.	7.5	7.0	6.7	8.9	---
10	Isokinetic flow rate for P.M. Sampling	LPM	22	20	26	20	---
11	Gaseous Sampling Flow Rate	LPM	2.0	2.0	2.0	2.0	---
12	Permissible limits for PM	mg/Nm3	150	150	150	150	150
13	Measured Concentration of PM.	mg/Nm3	7	6	42	9	---
14	Permissible limits for SO2	mg/Nm3	40	40	40	40	100 (ppm)
15	Measured Concentration of SO2	mg/Nm3	6.3	6.7	N.D.	N.D.	---
16	Permissible limits for NOx	mg/Nm3	25	25	25	25	50 (ppm)
17	Measured Concentration of Nox	mg/Nm3	7.5	7.9	6.7	6.4	---

Note: Minimum Detectable Limit of SO2 & Nox is 0.1 and 0.01 ppm respectively.  
Instrument Used: Stack Monitoring Kit Vayubodhan make - VSS I  
Both Stack kit have calibration Due on: 05/05/2014

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Ref. No. : 19/06/2013-14

Date: 28/06/2013

### STACK EMISSION MONITORING RESULTS

#### Captive Power Plant

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	Stack No. 6	Stack No. 7	Stack No. 8	Stack No. 9
01	Date of Sampling	---	Not Running	06/06/2013	Not Running	Not Running
02	Time of sampling	Hr.	During Visit	12.00	During Visit	During Visit
03	Stack Attached to	---	6000 KVA D.G.	3240 KVA D.G.	3240 KVA D.G.	1180 KVA D.G.
04	Air Pollution Control Measures	---	---	---	---	---
05	Stack Height	Meter	57.0	35	35	35
06	Stack Diameter	Meter	1.984	1.484	1.484	0.980
07	Stack Temperature	°C	---	123	---	---
08	Ambient Temperature	°C	---	32	---	---
09	Average Velocity of Flue Gases	M/Sec.	---	6.8	---	---
10	Isokinetic flow rate for P.M. Sampling	LPM	---	22	---	---
11	Gaseous Sampling Flow Rate	LPM	---	2.00	---	---
12	Permissible limits for PM	mg/Nm <sup>3</sup>	150	150	150	150
13	Measured Concentration of PM.	mg/Nm <sup>3</sup>	---	31	---	---
14	Permissible limits for SO <sub>2</sub>	ppm	100	100	100	100
15	Measured Concentration of SO <sub>2</sub>	ppm	---	15.9	---	---
16	Permissible limits for Nox	ppm	50	50	50	50
17	Measured Concentration of Nox	ppm	---	11.7	---	---

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

Instrument Used : Stack Monitoring Kit - Vayubodhan make - VSS I

Both Stack kit have calibration Due on : 05/05/2014





# Royal

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Ref No : 20/06/2013-14

Date : 08/06/2013

### STACK EMISSION MONITORING RESULTS

#### Pipe Complex

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	Stack No. 1	Stack No. 2	Stack No. 3	Stack No. 4	Stack No. 5	Stack No. 6	Stack No. 7
01	Date of Sampling	--	07/06/2013	08/06/2013	19/06/2013	07/06/2013	07/06/2013	07/06/2013	07/06/2013
02	Time of sampling	Hr.	9.10	17.50	8.45	Not Running During Visit	10.00	11.20	12.00
03	Stack Attached to	--	Shot Blasing (Coating Plant) - I	Shot Blasing (Coating Plant) - II	Shot Blasing (Coating Plant) - III	Bitumin Drying Oven - I	Common stack Bitumin Drying Oven - II & Boiler	Barrel Grinding - I	Barrel Grinding - II
04	Air Pollution Control Measures	---	Bag Filter	Bag Filter	Bag Filter	---	---	Bag Filter	Bag Filter
05	Stack Height	Meter	10.0	10.0	10.0	32.8	32.8	30	30
06	Stack Diameter	Meter	0.41	0.41	1.125	1.375	1.375	0.584	0.584
07	Stack Temperature	°C	36	38	40	---	131	42	40
08	Ambient Temperature	°C	30	32	33	---	30	32	34
09	Average Velocity of Flue Gases	M/Sec.	6.7	6.50	7.30	---	4.6	18.5	14.0
10	Isokinetic flow rate for P.M. Sampling	LPM	27	23	25	---	14	13	10
11	Gaseous Sampling Flow Rate	LPM	2.0	2.0	2.0	---	2.0	2.0	2.0
12	Permissible limits for PM	mg/Nm3	150	150	150	150	150	150	150
13	Measured Concentration of PM	mg/Nm3	52	47	50	---	40	42	43
14	Permissible limits for SO2	mg/Nm3	40	40	40	100 ppm	100 ppm	40	40
15	Measured Concentration of SO2	mg/Nm3	5.6	6.2	6.9	---	16.4	3.5	3.2
16	Permissible limits for Nox	mg/Nm3	25	25	25	50 ppm	50 ppm	25	25
17	Measured Concentration of Nox	mg/Nm3	3.4	3.9	3.6	---	10.9	4.7	3.9

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

Instrument Used : 2 Nos of Stack Monitoring Kit - Vayubodhan make - VSS I

Both Stack kit have calibration Due on : 05/05/2014

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Ref No : 21/06/2013-14

Date : 28/06/2013

### STACK EMISSION MONITORING RESULTS

#### Pipe Copmplex

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	Stack No. 8	Stack No. 9	Stack No. 10	Stack No. 11	Stack No. 12	Stack No. 13
01	Date of Sampling	---	07/06/2013	08/06/2013	07/06/2013	08/06/2013	08/06/2013	08/06/2013
02	Time of sampling	Hr.	16.15	10.00	15.00	11.15	12.10	15.00
03	Stack Attached to	---	Common stack Mg Converter- I&II	Mg Converter -III	Zn Coating - I	Zn Coating - II	Zn Coating - III	Zn Coating - IV & V
04	Air Pollution Control Measures	---	Bag Filter	Bag Filter	Cyclone Separator & Bag Filter	Cyclone Separator & Bag Filter	Cyclone Separator & Bag Filter	Cyclone Separator & Bag Filter
05	Stack Height	Meter	30	30	30	30	30	30
06	Stack Diameter	Meter	0.488	0.488	0.584	0.584	0.584	0.850
07	Stack Temperature	°C	62	59	55	45	43	42
08	Ambient Temperature	°C	34	30	37	32	32	36
09	Average Velocity of Flue Gases	M/Sec.	7.2	6.8	7.6	7.4	8.7	10.8
10	Isokinetic flow rate for P.M. Sampling	LPM	12	12	13	13	15	20
11	Gaseous Sampling Flow Rate	LPM	2.0	2.0	---	---	---	---
12	Permissible limits for PM	mg/Nm <sup>3</sup>	150	150	20 (Zn)	20 (Zn)	20 (Zn)	20 (Zn)
13	Measured Concentration of PM	mg/Nm <sup>3</sup>	30	31	15(Zn)	16 Zn	14(Zn)	15 (Zn)
14	Permissible limits for SO <sub>2</sub>	mg/Nm <sup>3</sup>	40	40	NA	NA	NA	NA
15	Measured Concentration of SO <sub>2</sub>	mg/Nm <sup>3</sup>	N.D	N.D	---	---	---	---
16	Permissible limits for Nox	mg/Nm <sup>3</sup>	25	25	NA	NA	NA	NA
17	Measured Concentration of Nox	mg/Nm <sup>3</sup>	4.3	3.9	---	---	---	---

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

N.D. Not Detectable

Instrument Used : 2 Nos of Stack Monitoring Kit - Vayubodhan make - VSS I

Both Stack kit have calibration Due on : 05/05/2014

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Ref No : 22/06/2013 14

Date: 16/06/2014

### STACK EMISSION MONITORING RESULTS

#### Pipe Complex

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	Stack No. 14	Stack No. 15	Stack No. 16	Stack No. 17	Stack No. 18	Stack No. 19
01	Date of Sampling	---	07/06/2013	08/06/2013	09/06/2013	09/06/2013	09/06/2013	09/06/2013
02	Time of sampling	Hr	17.00	16.30	9.10	Not Running During Visit	10.00	11.10
03	Stack Attached to	---	Core Cleaning & Dusting-I	Core Cleaning & Dusting-II	Core Shop-I	Core Shop-II	Core Shop-III	Core Shop-IV
04	Air Pollution Control Measures	---	Bag Filter	Bag Filter	---	---	---	---
05	Stack Height	Meter	30	30	30	30	30	30
06	Stack Diameter	Meter	0.588	0.59	0.584	0.584	0.584	0.584
07	Stack Temperature	°C	39	37	43	---	41	44
08	Ambient Temperature	°C	34	34	29	---	30	32
09	Average Velocity of Flue Gases	M/Sec.	13.50	12.6	11.7	---	14.2	11.8
10	Isokinetic flow rate for P.M. Sampling	LPM	10	9	21	---	10	8
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	150
13	Measured Concentration of PM	mg/Nm <sup>3</sup>	43	44	27	---	31	34
14	Permissible limits for SO <sub>2</sub>	mg/Nm <sup>3</sup>	40	40	40	40	40	40
15	Measured Concentration of SO <sub>2</sub>	mg/Nm <sup>3</sup>	2.7	2.9	N.D	---	3.5	3.6
16	Permissible limits for Nox	mg/Nm <sup>3</sup>	25	25	25	25	25	25
17	Measured Concentration of Nox	mg/Nm <sup>3</sup>	6.2	5.6	3.4	---	4.5	3.7

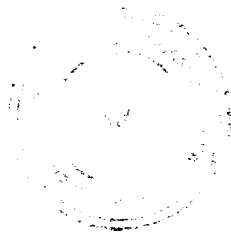
Note : Minimum Detectable Limit of SO<sub>2</sub> & Nox is 0.1 and 0.01 ppm respectively.

N.D : Not Detectable

Instrument Used : 2 Nos of Stack Monitoring Kit - Vayubodhan make - VSS I

Both Stack kit have calibration Due on : 05/05/2014

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Ref. No. 23/06/2013/14

Date: 28/06/2013

### STACK EMISSION MONITORING RESULTS

#### Pipe Complex

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	Stack No. 20	Stack No. 21	Stack No. 22	Stack No. 23	Stack No. 24	Stack No. 25
01	Date of Sampling	---	08/06/2013	09/06/2013	09/06/2013	09/06/2013	09/06/2013	09/06/2013
02	Time of sampling	Hr.	17.15	17.20	16.30	12.20	14.50	15.40
03	Stack Attached to	---	Annealing Furnace - I	Annealing Furnace - I	Annealing Furnace - II	Barrel Grinding-III	Barrel Grinding -IV&V	Sand Reclamation
04	Air Pollution Control Measures	---	---	---	---	Bag Filter	Bag Filter	Bag Filter
05	Stack Height	Meter	32	32	32	30	25	32
06	Stack Diameter	Meter	1.375	1.375	1.375	0.488	0.488	0.384
07	Stack Temperature	°C	132	144	169	39	42	74
08	Ambient Temperature	°C	33	33	35	31	36	36
09	Average Velocity of Flue Gases	M/Sec.	7.5	6.9	6.5	12.0	13.7	12.7
10	Isokinetic flow rate for P.M. Sampling	LPM	23	21	19	22	10	21
11	Gaseous Sampling Flow Rate	LPM	2.0	2.0	2.0	2.0	2.0	2.0
12	Permissible limits for PM	mg/Nm3	150	150	150	150	150	150
13	Measured Concentration of PM	mg/Nm3	29	31	33	40	46	49
14	Permissible limits for SO2	mg/Nm3	100 (PPM)	100 (PPM)	100 (ppm)	40	40	40
15	Measured Concentration of SO2	mg/Nm3	3.4 (PPM)	3.6 (PPM)	4.1 (PPM)	2.2	2.8	N.D.
16	Permissible limits for Nox	mg/Nm3	50 (PPM)	50 (PPM)	50 (PPM)	25	25	25
17	Measured Concentration of Nox	mg/Nm3	4.4 (PPM)	5.5 (PPM)	5.6 (PPM)	4.4	5.6	N.D.

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

Instrument Used: 2 Nos of Stack Monitoring Kit - Vayubodhan make - VSS I

Both Stack kit have calibration Due on: 05/05/2014

N.D. Not Detectable

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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).

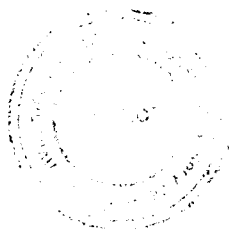
1. Name of the Department/Plant: **Sinter, BF, DISP, JCO & Coating Units at Jindal Saw Limited, Samaghogha.**
2. Raw materials, by products and finished products involved in the process: **TOTAL DUST**
3. Particulars of sampling

Date of Sampling: 8th & 9th June, 2013

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	Spiral Plant Nr. (D/O/D)	Total Dust	Personal Respirable Dust sampler APM 800	02	4-6	5.0	10	Gravimetric	8	---	<i>Manoj</i>	Mr. Manoj Sonrat
2	JCO Plant Nr. JCO Press	Total Dust		02	4-5	4.5	10	Gravimetric	6	---		
3	Sinter Plant At First Floor	Total Dust		02	3-4	3.5	10	Gravimetric	5	---		
4	BF Plant (Cast House)	CO		02	0.3-0.4	0.35	2	Gravimetric	9	---		
		Total Dust			3-5	4.0	10					
5	Coating Plant (Blasting Area)	Total Dust		02	4-5	4.5	10	Gravimetric	4	---		
6	DISP Plant Main Entrance	Total Dust	02	5-6	5.5	10	Gravimetric	10	---			

Instruments used: Envirotech make personal sampler, Model No. APM 800

Calibration Date Due on: 11/12/2013



For: Royal Environment Auditing & Consultancy Service

Authorized Sign



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Ref. No. : 25/06/2013-14

Date 28/06/2013

### WORK ZONE NOISE LEVEL MEASUREMENT

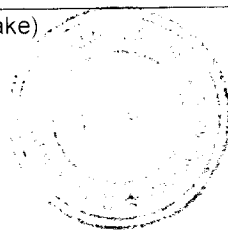
Name of company : Jindal Saw Limited,  
Village: Samaghogha,  
Tal. : Mundra, Dist. Kutch

Date of Sampling : 8th & 9th June, 2013

Sr. No.	Location of Sampling	Results Avg. in dB(A)
01.	Inside Control Room of Sinter Plant	68.3
02.	Nr. Stock House of BF	70.2
03.	Inside Control Room of BF	67.8
04.	Inside Control Room of Blower House	70.3
05.	Inside Control of Cast House	68.9
06.	Inside Control Room of CPP	67.1
07.	Inside Control Room of Annealing Furnace of DISP	66.5
08.	Inside Laboratory of BF	64.9
09.	Inside Laboratory of DISP	66.6
10.	Inside ID & OD Control Room of JCO Plant	65.4
11.	Inside Control Room – Mill area of Spiral Plant	69.8
12.	Inside Spiral – 1	72.8
13.	Nr. Pipe cutting Area of Spiral Plant	72.1
14.	Inside JCO Plant	69.7
15.	Nr. JCO Press	69.4
16.	Inside DISP Plant	73.2
17.	Inside Coating Plant	69.9

Instruments used : Sound level meter, Model : SL - 4001 (Lutron Make)  
Range : A - 30 to 80 dB, B-50 to 100 dB, C-80 to 130 dB.  
Recalibration is due on : 05/10/2013

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Ref. No. : 26/06/2013-14

Date: 28/06/2013

### AMBIENT NOISE LEVEL MEASUREMENT

Name of company : Jindal Saw Limited,  
Village: Samaghogha,  
Tal. : Mundra, Dist. Kutch

Date of Sampling : 8th & 9th June, 2013

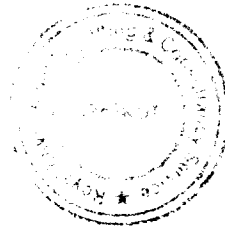
Sr. No.	Location of Sampling	Results in dB(A) (Day Time)	Results in dB(A) (Night Time)
	<b>Permissible Limits</b>	<b>75.0</b>	<b>70.0</b>
01.	Nr. Admin. Building	67.8	65.4
02.	Nr. Old Colony	65.9	63.1
03.	Nr. LPG Yard	69.3	67.4
04.	Nr Sinter Plant	73.8	69.2
05.	Nr. R. O. Plant	69.1	66.6
06.	Nr. Gate No. 2	67.8	65.3
07.	Nr. New Colony	67.5	64.7

Instruments used : Sound level meter, Model : SL - 4001 (Lutron Make)

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

Recalibration is due on : 05/10/2013

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Ref. No. : 27/06/2013-14

Date: 28/06/2013

### WATER SAMPLE ANALYSIS REPORT

Name of company : Jindal Saw Limited,  
Village: Samaghogha,  
Tal. : Mundra. Dist. Kutch

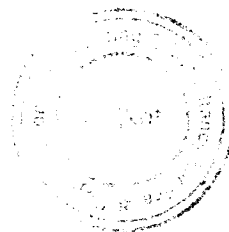
Date of Sample Collection : 09/06/2013

Source of Sample : Borewell Water Sample From Nr, Mess

Sr. No.	Parameters	Unit	Acceptable Limit(*)	Permissible Limits(*)	Results
01.	Colour	Pt.Co.Scale	5	15	Colourless
02.	Odour	--	Agreable	Agreable	Odourless
03.	pH	pH Unit	6.5 to 8.5	No Relaxation	7.84
04.	T.D.S.	mg/l	500	2000	1265
05.	Total Hardness	mg/l	200	600	412
06.	Turbidity	NTU	1	5	3.0
07.	Chloride	mg/l	250	1000	497
08.	Alkalinity	mg/l	200	600	200
09.	Phenolic Compound	mg/l	0.001	0.002	NII
10.	Residual Chlorine	mg/l	0.2	1.0	NII
11.	Fluoride	mg/l	1.0	1.5	0.38
12.	Ca as Ca	mg/l	75	200	176
13.	Mg as Mg	mg/l	30	100	129
14.	Copper	mg/l	0.05	1.5	NII
15.	Iron	mg/l	0.3	No Relaxation	0.22
16.	Manganese	mg/l	0.1	0.3	0.19
17.	Sulphate	mg/l	200	400	0.48
18.	Nitrate	mg/l	45	No Relaxation	9.5

(\*) Acceptable Limit & Permissible Limits as per IS 10500 : 2012, Drinking Water Specification

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Ref. No. : 28/06/2013-14

Date: 23/06/2013

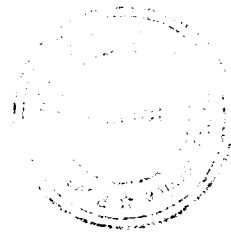
### REPORT OF DOMESTIC WASTE WATER ANALYSIS

Name of company : Jindal Saw Limited,  
Village: Samaghogha,  
Tal. : Mundra, Dist. Kutch

Source Of Sample Collection : Domestic Effluent After Treatment  
Date of Sample Collection : 09/06/2013

Sr. No.	Parameters	Unit	GPCB limits	STP Inlet	STP Outlet
01.	pH	pH Unit	----	7.68	7.15
02.	BOD (3 Days at 27°C)	mg/l	<20	189	7
03.	Suspended Solids	mg/l	<30	91	19
04.	Residual Chlorine	mg/l	Min. 0.5	----	0.68

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