



# Royal

## Environment Auditing & Consultancy Service

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

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

Ref. No. 371/07/2014-15

Date: 01/08/2014

### 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	----	04/07/2014	04/07/2014	04/07/2014
03.	Time of sampling	----	8.00	8.30	9.00
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	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	59	65	49
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	34	42	26
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	9.3	11.3	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	15.6	22.1	20.3
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	251	320	210

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 04/06/2015



# Royal

## Environment Auditing & Consultancy Service

30G-304, Shivalik-7, B/s. Bal Adaiat, Gondal Road, RAJKOT - 360 002

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

Ref No. 372/07/2014-15

Date: 01/08/2014

### 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	----	05/07/2014	05/07/2014	05/07/2014
03.	Time of sampling	----	8.10	8.40	9.15
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	----	SW	SW	SW
06.	Average Wind Speed	Km/Hr.	3 to 11	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>100</b>	<b>100</b>	<b>100</b>
10.	Measured Concentration of PM 10	µg/m <sup>3</sup>	62	70	47
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	41	22
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>	9.3	11.3	8.3
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>	18.3	22.9	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>	288	321	201

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 04/06/2015



# Royal

## Environment Auditing & Consultancy Service

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

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

Ref. No 373/07/2014-15

Date: 01/08/2014

### 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	----	08/07/2014	08/07/2014	08/07/2014
03.	Time of sampling	----	8.00	8.15	9.00
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 12	6 to 12	6 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.	<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	56	67	45
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	30	32	20
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	9.3	12.4	8.6
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	20.6	20.3	15.6
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	259	351	210

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 04/06/2015



# Royal

## Environment Auditing & Consultancy Service

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

Ph.: +91 281 2360695 ■ E-mail : royalsenvironment@live.com ■ admin@roya.consultancy.com

Ref. No. 156/06/2014-15

Date: 01/08/2014

### 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	----	09/07/2014	09/07/2014	09/07/2014
03.	Time of sampling	----	9.00	9.20	9.40
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.	1 to 10	1 to 10	1 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	55	64	48
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	34	30	24
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	10.1	11.3	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	20.1	21.3	17.6
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	246	361	216

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 04/06/2015



# Royal

## Environment Auditing & Consultancy Service

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

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

Ref. No. 375/07/2014-15

Date: 01/08/2014

### 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	---	18/07/2014	18/07/2014	18/07/2014
03.	Time of sampling	---	8.30	9.00	9.20
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.	1 to 5	1 to 5	1 to 5
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>	56	59	49
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>	29	44	30
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>	10.3	12.9	9.2
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>	20.6	24.1	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>	314	351	216

Instrument used : (1) Envirotech make 1 No. of RDS (APM - 460 BL) (2) 1 No. of Gaseous Sampling Kit (APM 411) (3) Ecotech make Attechr  
 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 04/06/2015



# Royal

## Environment Auditing & Consultancy Service

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

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

Ref. No. 376/07/2014-15

Date: 01/08/2014

### 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	----	19/07/2014	19/07/2014	19/07/2014
03.	Time of sampling	----	8.40	9.15	9.30
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.	5 to16	5 to16	5 to16
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	59	62	52
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	32	46	28
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	9.1	10.3	10.9
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	21.4	21.8	20.3
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	320	349	222

Instrument used : (1) Envirotech make 1 No. of RDS (APM - 460 BL) (2) 1 No. of Gaseous Sampling Kit (APM 411) (3) Ecotech make Attechmer 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 04/06/2015



# Royal

## Environment Auditing & Consultancy Service

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

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

Ref. No. : 377/07/2014-15

Date: 01/08/2014

### 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	----	23/07/2014	23/07/2014	23/07/2014
03.	Time of sampling	----	8.00	8.20	8.30
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 16	6 to 16	6 to 16
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	54	60	40
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	35	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	11.1	10.3	9.3
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	20.3	21.0	14.5
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	312	326	214

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 04/06/2015



# Royal

## Environment Auditing & Consultancy Service

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

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

Ref. No. : 378/07/2014-15

Date: 01/08/2014

### 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	----	24/07/2014	24/07/2014	24/07/2014
03.	Time of sampling	----	8.15	8.30	8.50
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.	1 to 4	1 to 4	1 to 4
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	50	58	42
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	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	10.1	10.6	9.3
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	19.2	20.1	18.6
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	301	312	204

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 04/06/2015



*Handwritten signature/initials*



# Royal

## Environment Auditing & Consultancy Service

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

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

Ref. No. : 379/07/2014-15

Date: 01/08/2014

### AMBIENT AIR QUALITY MONITORING REPORT

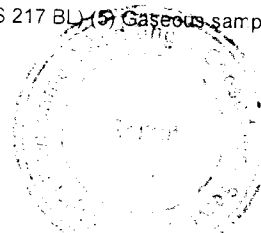
Name of company : Jindal Saw Limited,  
Village: Samaghogha,  
Tal. : Mundra, Dist. Kutch

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	----	28/07/2014	28/07/2014	28/07/2014
03.	Time of sampling	----	8.20	8.30	8.55
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.	4 to 15	4 to 15	4 to 15
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	49	52	39
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	22	26	19
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	9.6	9.9	7.6
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	19.3	19.6	10.2
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	306	310	204

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 04/06/2015





# Royal

## Environment Auditing & Consultancy Service

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

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

Ref. No. : 380/07/2014-15

Date: 01/08/2014

### 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	----	29/07/2014	29/07/2014	29/07/2014
03.	Time of sampling	----	8.30	8.50	9.00
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.	5 to 12	5 to 12	5 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.	<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	52	55	45
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	22	30	27
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	9.6	8.7	8.6
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	17.6	19.9	15.6
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	300	316	210

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 04/06/2015



# Royal

## Environment Auditing & Consultancy Service

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

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

Date: 01/08/2014

Ref. No. : 301/07/2014-15

### 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	----	07/07/2014	07/07/2014	10/07/2014	10/07/2014
03.	Time of sampling	----	8.30	9.00	9.30	10.00
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	----	WSW	WSW	WSW	WSW
06.	Average Wind Speed	Km/Hr.	0.20 to 12.20	0.20 to 12.20	2.1 to 11.8	2.1 to 11.8
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	70	60	61
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	24	30	42	32
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	10.9	10.9	13.2	11.6
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	11.6	15.6	26.1	20.3
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	118	210	362	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 04/06/2015



# Royal

## Environment Auditing & Consultancy Service

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

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

Date: 01/08/2014

Ref. No. : 302/07/2014-15

### 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	----	08/07/2014	08/07/2014	09/07/2014	09/07/2014
03.	Time of sampling	-----	9.00	9.20	9.20	9.30
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	-----	WSW	WSW	WSW	WSW
06.	Average Wind Speed	Km/Hr.	6 to 12	6 to 12	1 to 10	1 to 10
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	50	65	58	78
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	25	34	29	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	11.5	11.9	11.7	14.8
15.	<b>Permissible limits for Nox</b>	<b>µg/m3</b>	<b>80</b>	<b>80</b>	<b>80</b>	<b>80</b>
	Measured Concentration of NOx	µg/m3	19.3	20.7	22.1	28.2
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	254	180	241	421

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

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

Calibration due on 04/06/2015



# Royal

## Environment Auditing & Consultancy Service

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

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

Ref No : 305/07/2014-15

Date: 01/08/2014

### Bag Filter & ESP Efficiency Report

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	---	07/07/2014	08/07/2014	08/07/2014	07/07/2014	09/07/2014	09/07/2014	12/07/2014
02	Attached to		Sinter-1 Furnace	Sinter-1 Discharge end	Sinter-1 Flux Screening	Sinter-2 Furnace	Sinter-2 Discharge end	Sinter-2 Flux Crushing	Sinter-2 Flux Screening
03	Stack Height	Meter	50	32	32	50	50	30	30
04	Stack Diameter	Meter	2.0	1.3	1.4	2.0	1.3	0.7	0.7
05	Stack Temperature	°C	138	120	46	131	123	53	50
06	Ambient Temperature	°C	35	36	34	35	35	35	36
07	Average Velocity of Flue Gases	m/Sec	20.3	15.9	13.7	19.3	18.9	13.7	14.1
08	IsoKinetic Flowrate for Sampling	LPM	28	23	24	27	27	23	24
09	Inlet	mg/Nm <sup>3</sup>	3548	2531	2120	3508	2014	1689	1896
10	Outlet	mg/Nm <sup>3</sup>	60	40	34	62	28	25	28
11	Efficiency	%	98.31	98.42	98.40	98.23	98.61	98.52	98.52

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

Calibration due on 04/06/2015

Royal Environment Auditing & Consultancy Service

Analyst



# Royal

## Environment Auditing & Consultancy Service

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

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

Ref No. : 306/01/2014-15

Date: 01/03/2014

### Bag Filter Efficiency Report

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
01	Date of Sampling	---	19/07/2014	19/07/2014	24/07/2014	23/07/2014
02	Attached to		Zinc Coating -I	Common stack Mg Converter- I &II	Core Cleaning & Dusting-I	Sand Reclamation
03	Stack Height	Meter	30	30	30	32
04	Stack Diameter	Meter	0.584	0.488	0.588	0.885
05	Stack Temperature	°C	45	65	45	88
06	Ambient Temperature	°C	32	34	35	35
07	Average Velocity of Flue Gases	m/Sec.	14.6	15.8	14.3	15.5
08	IsoKinetic Flowrate for Sampling	LPM	26	26	25	24
09	Inlet	mg/Nm <sup>3</sup>	1956	2968	1756	2658
10	Outlet	mg/Nm <sup>3</sup>	18	54	32	60
11	Efficiency	%	99.08	98.18	98.18	97.74

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

Calibration due on 04/06/2015



# Royal

## Environment Auditing & Consultancy Service

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

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

Ref. No. : 307/07/2014-15

Date: 01/08/2014

### Bag Filter Efficiency Report

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. 12	Stack No. 13	Stack No. 14	Stack No. 15	Stack No. 16
01	Date of Sampling	---	21/07/2014	21/07/2014	21/07/2014	23/07/2014	24/07/2014
02	Attached to	---	Zinc Coating - II	Zinc Coating-III	Zinc Coating -IV & V	Mg Converter - III	Core Cleaning & Dusting-II
03	Stack Height	Meter	30	30	30	30	30
04	Stack Duct Diameter	Meter	0.584	0.584	0.85	0.488	0.588
05	Stack Temperature	°C	49	45	49	54	44
06	Ambient Temperature	°C	35	36	36	36	33
07	Average Velocity of Flue Gases	M/Sec	12.2	12.54	14.8	13.2	12.2
08	IsoKinetic Flowrate for Sampling	LPM	21	22	26	22	21
09	Inlet	mg/Nm <sup>3</sup>	1856	2012	1968	2103	2136
10	Outlet	mg/Nm <sup>3</sup>	18	16	18	35	30
11	Efficiency	%	99.03	99.20	99.09	98.34	98.60

Note: Maximum Permissible 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 - Vayubocan make - VSS I

Calibration due on: 04.06/2015

Royal Environment Auditing & Consultancy Service

Analyst



# Royal

## Environment Auditing & Consultancy Service

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

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

Ref. No. :303/07/2014-15

Date: 07/08/2014

### 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	----	11/07/2014	11/07/2014	12/07/2014
03.	Time of sampling	----	9.20	9.40	9.30
04.	Duration of Sampling	Hr.	8.00	8.00	8.00
05.	Dominant Wind Direction (From)	----	WSW	WSW	WSW
06.	Average Wind Speed	Km/Hr.	2 to 16	2 to 16	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>3000</b>	<b>3000</b>	<b>3000</b>
10.	Measured Concentration of PM 10	µg/m3	2165	2458	2689
11.	<b>Permissible limits for SO2</b>	<b>µg/m3</b>	<b>150</b>	<b>150</b>	<b>150</b>
12.	Measured Concentration of SO2	µg/m3	22.1	22.5	20.3
13.	<b>Permissible limits for NO2</b>	<b>µg/m3</b>	<b>120</b>	<b>120</b>	<b>120</b>
14.	Measured Concentration of NO2	µg/m3	30.2	30.8	27.6
15.	<b>Permissible limit for CO **</b>	<b>µg/m3</b>	<b>5000</b>	<b>5000</b>	<b>5000</b>
16.	Measured Concentration of CO	µg/m3	392	478	321

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 04/06/2015



# Royal

## Environment Auditing & Consultancy Service

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

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

Ref. No. : 304/07/2014-15

Date 01/08/2014

### 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 "CCM" Area	Sinter 1 Main to PMD
02.	Date of sampling	----	12/07/2014	18/07/2014	18/07/2014
03.	Time of sampling	----	9.55	9 00	9.30
04.	Duration of Sampling	Hr.	8.00	8 00	8.00
05.	Dominant Wind Direction (From)	----	WSW	WSW	WSW
06.	Average Wind Speed	Km/Hr.	3 to 10	1 to 5	1 to 5
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>3000</b>	<b>3000</b>	<b>3000</b>
10.	Measured Concentration of PM 10	µg/m3	2210	846	1365
11.	<b>Permissible limits for SO2</b>	<b>µg/m3</b>	<b>150</b>	<b>150</b>	<b>150</b>
12.	Measured Concentration of SO2	µg/m3	19.6	18.2	15.2
13.	<b>Permissible limits for NO2</b>	<b>µg/m3</b>	<b>120</b>	<b>120</b>	<b>120</b>
14.	Measured Concentration of NO2	µg/m3	28.5	24.4	20.8
15.	<b>Permissible limit for CO **</b>	<b>µg/m3</b>	<b>5000</b>	<b>5000</b>	<b>5000</b>
16.	Measured Concentration of CO	µg/m3	256	501	298

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 04/06/2015



# Royal

## Environment Auditing & Consultancy Service

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

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

Ref. No. : 308/07/2014-15

Date: 01/08/2014

### 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	---	07/07/2014	08/07/2014	08/07/2014	Not Running During Visit	10/07/2014	10/07/2014
02	Time of sampling	---	9.30	10.00	12.00		9.20	10.30
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	149	136	45	---	54	90
08	Ambient Temperature	°C	29	30	34	---	28	30
09	Average Velocity of Flue Gases	M/Sec	12.8	14.4	9.6	---	7.2	6.4
10	Isokinetic flow rate for P.M. Sampling	LPM	17	20	17	---	28	22
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>	60	44	38	---	44	71
14	Permissible limits for SO <sub>2</sub>	ppm	100	NA	NA	NA	NA	NA
15	Measured Concentration of SO <sub>2</sub>	ppm	12.2	---	---	---	---	---
16	Permissible limits for NO <sub>x</sub>	ppm	50	NA	NA	NA	NA	NA
17	Measured Concentration of NO <sub>x</sub>	ppm	16.8	---	---	---	---	---

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

Calibration due on 04/06/2015

Royal Environment Auditing & Consultancy Service

Analyst



# Royal

## Environment Auditing & Consultancy Service

303-304, Shivalik-7, B/s. Bai Adalat, Gonda Road, RAJKOT - 360 002.

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

Ref No. 309/07/2014-15

Date: 01/08/2014

### 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	---	07/07/2014	09/07/2014	09/07/2014	11/07/2014	11/07/2014	12/07/2014	
02	Time of sampling	Hr.	12.00	9.30	11.00	9.45	11.00	12.00	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	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	0.7
07	Stack Temperature	°C	146	128	48	84	58	43	---
08	Ambient Temperature	°C	33	29	32	29	34	35	---
09	Average Velocity of Flue Gases	M/Sec.	14.8	16.2	9.6	7.1	5.2	5.9	---
10	Isokinetic flow rate for P.M. Sampling	LPM	20	23	17	25	20	24	---
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	62	28	25	72	55	28	---
14	Permissible limits for SO2	ppm	100	NA	NA	NA	NA	NA	NA
15	Measured Concentration of SO2	ppm	16.2	---	---	---	---	---	---
16	Permissible limits for NOx	ppm	50	NA	NA	NA	NA	NA	NA
17	Measured Concentration of NOx	ppm	21.5	---	---	---	---	---	---

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 - Vayubochan make - VSS I

Calibration due on 04/06/2015

Royal Environment Auditing & Consultancy Service

Analyst



# Royal

## Environment Auditing & Consultancy Service

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

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

Ref. No. : 311/07/2014-15

Date: 01/08/2014

### STACK EMISSION MONITORING RESULTS

#### BLAST FURNACE-1 & PCI

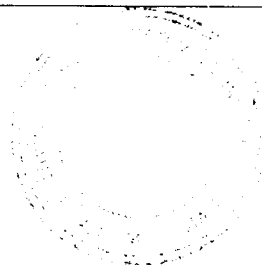
Name of company : Jindal Saw Limited,  
Village: Samaghogha,  
Tal. : Mundra, Dist. Kutch

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	---	25/07/2014	25/07/2014	25/07/2014	25/07/2014	Not Running During Visit
02	Time of sampling	Hr.	14.50	15.50	11.30	9.00	
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	32.0
06	Stack Diameter	Meter	1.380	1.380	1.484	2.250	---
07	Stack Temperature	°C	168	173	60	321	---
08	Ambient Temperature	°C	32	32	29	27	---
09	Average Velocity of Flue Gases	M/Sec.	5.1	4.9	6.1	7.2	---
10	Isokinetic flow rate for P.M. Sampling	LPM	15	14	23	15	---
11	Gaseous Sampling Flow Rate	LPM	2.0	2.0	2.0	2.0	---
12	<b>Permissible limits for PM</b>	<b>mg/Nm3</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>
13	Measured Concentration of PM.	mg/Nm3	12	15	67	9	---
14	<b>Permissible limits for SO2</b>	<b>mg/Nm3</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>100 (ppm)</b>
15	Measured Concentration of SO2	mg/Nm3	7.3	5.2	N.D.	1.35	---
16	<b>Permissible limits for NOx</b>	<b>mg/Nm3</b>	<b>25</b>	<b>25</b>	<b>25</b>	<b>25</b>	<b>50 (ppm)</b>
17	Measured Concentration of Nox	mg/Nm3	10.3	8.1	N.D.	7.2	---

Note : Minimum Detectable Limit of SO2 & Nox is 0.1 and 0.01 ppm respectively.  
Instrument Used : Stack Monitoring Kit - Vayubodhan make - VSS I  
Calibration due on 04/06/2015

Royal Environment Auditing & Consultancy Service



*[Signature]*  
Analyst



# Royal

## Environment Auditing & Consultancy Service

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

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

Ref. No. : 310/07/2014-15

Date: 01/08/2014

### STACK EMISSION MONITORING RESULTS

#### BLAST FURNACE-2

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
01	Date of Sampling	---	22/07/2014	22/07/2014	22/07/2014	22/07/2014
02	Time of sampling	Hr.	9.30	11.30	14.00	15.30
03	Stack Attached to	---	Dedusting System	Stove Stack	Iron Ore fine & Dust Collecting System	Coke fine building dust collecting system
04	Air Pollution Control Measures	---	Bag Filter	---	Bag Filter	Bag Filter
05	Stack Height	Meter	40.0	65.0	30.0	30.0
06	Stack Diameter	Meter	1.484	2.250	0.650	---
07	Stack Temperature	°C	61	32E	49	42
08	Ambient Temperature	°C	29	30	35	35
09	Average Velocity of Flue Gases	M/Sec.	6.2	7.1	11.6	11.2
10	Isokinetic flow rate for P.M. Sampling	LPM	24	15	20	20
11	Gaseous Sampling Flow Rate	LPM	---	---	---	---
12	Permissible limits for PM	mg/Nm3	150	150	150	150
13	Measured Concentration of PM.	mg/Nm3	62	10	42	58
14	Permissible limits for SO2	mg/Nm3	NA	NA	NA	NA
15	Measured Concentration of SO2	mg/Nm3	---	---	---	---
16	Permissible limits for NOx	mg/Nm3	NA	NA	NA	NA
17	Measured Concentration of Nox	mg/Nm3	---	---	---	---

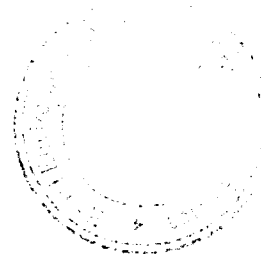
Note : Minimum Detectable Limit of SO2 & Nox is 0.1 and 0.01 ppm respectively.

\*\*NA=Not Applicable

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

Calibration due on 04/06/2015

Royal Environment Auditing & Consultancy Service



*[Signature]*  
Analyst



# Royal

## Environment Auditing & Consultancy Service

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

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

Ref. No. : 312/07/2014-15

Date: 01/08/2014

### 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 during visit	Not running during visit	Not running during visit	Not running during visit
02	Time of sampling	Hr.				
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	---	---	---	---
08	Ambient Temperature	°C	---	---	---	---
09	Average Velocity of Flue Gases	M/Sec.	---	---	---	---
10	Isokinetic flow rate for P.M. Sampling	LPM	---	---	---	---
11	Gaseous Sampling Flow Rate	LPM	---	---	---	---
12	Permissible limits for PM	mg/Nm <sup>3</sup>	150	150	150	150
13	Measured Concentration of PM.	mg/Nm <sup>3</sup>	---	---	---	---
14	Permissible limits for SO <sub>2</sub>	ppm	100	100	100.0	100
15	Measured Concentration of SO <sub>2</sub>	ppm	---	---	---	---
16	Permissible limits for Nox	ppm	50	50	50.0	50
17	Measured Concentration of Nox	ppm	---	---	---	---

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

Calibration due on 04/06/2015

Royal Environment Auditing & Consultancy Service

A. L. T.  
Analyst



# Royal

## Environment Auditing & Consultancy Service

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

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

Ref. No. : 313/07/2014-15

Date: 01/08/2014

### 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. 1	Stack No. 2	Stack No. 3	Stack No. 4	Stack No. 5	Stack No. 6	Stack No. 7
01	Date of Sampling	---	---	---	---	---	18/07/2014	18/07/2014	18/07/2014
02	Time of sampling	Hr	Not Running During Visit	Not Running During Visit	Not Running During Visit	Not Running During Visit	9.50	11.00	12.00
03	Stack Attached to	---	Shot Blasing - I	Shot Blasing - II	Shot Blasing - 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	---	---	---	---	141	55	59
08	Ambient Temperature	°C	---	---	---	---	30	32	35
09	Average Velocity of Flue Gases	M/Sec.	---	---	---	---	10.9	7.5	7.1
10	Isokinetic flow rate for P.M. Sampling	LPM	---	---	---	---	15	29	27
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	150	150	150
13	Measured Concentration of PM	mg/Nm <sup>3</sup>	---	---	---	---	97	46	59
14	Permissible limits for SO <sub>2</sub>	mg/Nm <sup>3</sup>	40	40	40	100 ppm	100 ppm	40	40
15	Measured Concentration of SO <sub>2</sub>	mg/Nm <sup>3</sup>	---	---	---	---	10.3	N D	N D
16	Permissible limits for Nox	mg/Nm <sup>3</sup>	25	25	25	50 ppm	50 ppm	25	25
17	Measured Concentration of Nox	mg/Nm <sup>3</sup>	---	---	---	---	15	N D	N D

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

Calibration due on 04/06/2015

Royal Environment Auditing & Consultancy Service



Analyst



# Royal

## Environment Auditing & Consultancy Service

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

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

Ref No : 314/07/2014-15

Date: 01/08/2014

### 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	---	19/07/2014	23/07/2014	19/07/2014	21/07/2014	21/07/2014	21/07/2014
02	Time of sampling	Hr.	9.00	10.30	11.00	14.00	15.00	16.00
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	53	54	45	49	45	49
08	Ambient Temperature	°C	29	36	32	35	36	36
09	Average Velocity of Flue Gases	M/Sec.	15.8	13.2	15.9	12.2	12.5	14.8
10	Isokinetic flow rate for P.M. Sampling	LPM	27	23	28	21	22	27
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>	68	40	18 (Zn)	18 (Zn)	16 (Zn)	18 (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>	1.3	0.6	---	---	---	---
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>	9.6	5.2	---	---	---	---

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

Calibration due on 04/06/2015

Royal Environment Auditing & Consultancy Service

*Analyst*  
Analyst



# Royal

## Environment Auditing & Consultancy Service

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

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

Ref No : 315/07/2014-15

Date 01/07/2014

### 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	---	24/07/2014	24/07/2014	25/07/2014	25/07/2014	25/07/2014	25/07/2014
02	Time of sampling	Hr	12.00	14.00	9.30	10.15	11.00	14.00
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	45	44	36	39	38	37
08	Ambient Temperature	°C	35	33	29	30	35	35
09	Average Velocity of Flue Gases	M/Sec.	14.3	12.2	6.2	6.5	6.1	5.1
10	Isokinetic flow rate for P.M. Sampling	LPM	25	21	25	26	25	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	32	30	30	18	20	35
14	Permissible limits for SO <sub>2</sub>	mg/Nm3	40	40	40	40	40	40
15	Measured Concentration of SO <sub>2</sub>	mg/Nm3	6.8	4.1	N.D.	N.D.	N.D.	N.D.
16	Permissible limits for Nox	mg/Nm3	25	25	25	25	25	25
17	Measured Concentration of Nox	mg/Nm3	9.1	6.2	N.D.	N.D.	N.D.	N.D.

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

Calibration due on 04/06/2015

Royal Environment Auditing & Consultancy Service

Analyst



# Royal

## Environment Auditing & Consultancy Service

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

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

Ref. No. : 316/07/2014-15

Date: 01/08/2014

### 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. 20	Stack No. 21	Stack No. 22	Stack No. 23	Stack No. 24	Stack No. 25
01	Date of Sampling	---	26/07/2014	26/07/2014	26/07/2014	26/07/2014	18/07/2014	23/07/2014
02	Time of sampling	Hr.	9.30	10.40	11.30	12.50	15.00	12.00
03	Stack Attached to	---	Annealing Furnace - I	Annealing Furnace - II	Annealing Furnace - III	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	0.885
07	Stack Temperature	°C	159	160	151	55	52	88
08	Ambient Temperature	°C	29	30	34	36	35	35
09	Average Velocity of Flue Gases	M/Sec.	6.9	7.9	6.1	7.1	6.9	15.5
10	Isokinetic flow rate for P.M. Sampling	LPM	20	23	18	27	27	25
11	Gaseous Sampling Flow Rate	LPM	2.0	2.0	2.0	2.0	2.0	2.0
12	Permissible limits for PM	mg/Nm <sup>3</sup>	150	150	150	150	150	150
13	Measured Concentration of PM	mg/Nm <sup>3</sup>	60	58	52	59.00	55.00	60
14	Permissible limits for SO <sub>2</sub>	mg/Nm <sup>3</sup>	100 (PPM)	100 (PPM)	100 (ppm)	40	40	40
15	Measured Concentration of SO <sub>2</sub>	mg/Nm <sup>3</sup>	3.2(PPM)	4.6(PPM)	3.8(PPM)	N.D.	N.D.	N.D.
16	Permissible limits for Nox	mg/Nm <sup>3</sup>	50 (PPM)	50 (PPM)	50 (PPM)	25	25	25
17	Measured Concentration of Nox	mg/Nm <sup>3</sup>	7.6 (PPM)	8.1 (PPM)	8.6 (PPM)	N.D.	N.D.	N.D.

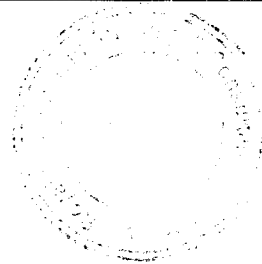
Note : Minimum Detectable Limit of SO<sub>2</sub> & Nox is 0.1 and 0.01 ppm respectively.

N.D= Not Detectable

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

Calibration due on 04/06/2015

Royal Environment Auditing & Consultancy Service



*[Signature]*  
Analyst



# Royal

## Environment Auditing & Consultancy Service

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

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

Ref. No. : 317/07/2014-15

Date: 01/08/2014

### STACK EMISSION MONITORING RESULTS

#### Small Dia Ductile Iron Pipe Complex

Name of company : Jindal Saw Limited.

Village: Samaghogna.

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	---	28/07/2014	28/07/2014	28/07/2014	28/07/2014	28/07/2014	Not in operation
02	Time of sampling	Hr	9.30	10.40	11.50	14.00	15.10	
03	Stack Attached to	---	Annealing Furnace - I	Annealing Furnace - II	Magnesium Treatment	Socket Cleaning	Zinc Coating	Tri- Grinding Section
04	Air Pollution Control Measures	---	---	---	Bag Filter	Bag Filter	Bag Filter	Bag Filter
05	Stack Height	Meter	45	45	30	30	30	---
06	Stack Diameter	Meter	---	---	---	---	---	---
07	Stack Temperature	°C	145	141	47	38	41	---
08	Ambient Temperature	°C	28	29	30	32	32	---
09	Average Velocity of Flue Gases	M/Sec.	7.1	7.3	4.1	4.6	7.1	---
10	Isokinetic flow rate for P.M. Sampling	LPM	22	22	16	19	13	---
11	Gaseous Sampling Flow Rate	LPM	2.0	2.0	---	---	---	---
12	Permissible limits for PM	mg/Nm <sup>3</sup>	50	50	50	50	50	50
13	Measured Concentration of PM.	mg/Nm <sup>3</sup>	40	34	39	36	19 (Zn)	---
14	Permissible limits for SO <sub>2</sub>	PPM	100	100	NA	NA	NA	NA
15	Measured Concentration of SO <sub>2</sub>	PPM	8.3	10.2	---	---	---	---
16	Permissible limits for Nox	PPM	50	50	NA	NA	NA	NA
17	Measured Concentration of Nox	PPM	9.9	7.6	---	---	---	---

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

Calibration due on 04/06/2015

Royal Environment Auditing & Consultancy Service



Analyst



# Royal

## Environment Auditing & Consultancy Service

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

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

Ref. No. : 319/07/2014-15

Date: 01/08/2014

### WORK ZONE NOISE LEVEL MEASUREMENT

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

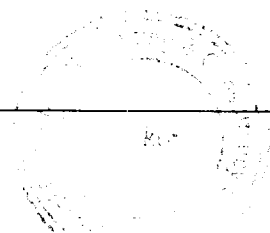
Date of sampling : 7th to 12th July,2014

Sr. No.	Location of Sampling	Results Avg. in dB(A)
01.	Inside Control Room of Sinter Plant	59.2
02.	Nr. Stock House of BF	71.3
03.	Inside Control Room of BF	60.1
04.	Inside Control Room of Blower House	57.6
05.	Inside Control of Cast House	55.3
06.	Inside Control Room of CPP	52.9
07.	Inside Control Room of Annealing Furnace of DISP	58.4
08.	Inside Laboratory of BF	52.5
09.	Inside Laboratory of DISP	55.8
10.	Inside ID & OD Control Room of JCO Plant	55.1
11.	Inside Control Room – Mill area of Spiral Plant-2	60.8
12.	Inside Spiral – 1	72.5
13.	Nr. Pipe cutting Area of Spiral Plant	73.8
14.	Inside JCO Plant	72.5
15.	Nr. JCO Press	70.3
16.	Inside DISP Plant	69.9
17.	Inside Coating Plant	73.1
18.	Nr. CCM SDP-II	68.5
19.	Inside Control Room of Annealing Furnace of SDP-II	55.4
20.	Inside New Coating Plant	71.1
21.	Inside Control Room of BF-2	54.5
22.	Inside Spiral-2	72.6
23.	Nr. Zinc Coating SDP-II	72.2
24.	Nr. Stock House of BF-2	65.5
25.	C/R Blower House of BF-2	72.9
26.	Near Mould Shop	78.0

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.

Recalibration is due on : 29/09/2014





# Royal

## Environment Auditing & Consultancy Service

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

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

Ref. No. : 320/07/2014-15

Date: 01/08/2014

### AMBIENT NOISE LEVEL MEASUREMENT

Name of company : Jindal Saw Limited.

Village: Samaghogha,

Tal. : Mundra, Dist. Kutch

Date of sampling : 7th to 12th July, 2014

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	56.7	50.1
02.	Nr. Old Colony	52.3	49.3
03.	Nr. LPG Yard	64.9	61.4
04.	Nr. Sinter Plant	71.1	67.8
05.	Nr. R. O. Plant	65.7	60.2
06.	Nr. Gate No. 2	62.4	59.1
07.	Nr. New Colony	59.3	54.4
08.	Nr. SDP-2	69.2	64.7
09.	Nr. BLAST FURNACE-2	72.4	68.8
10.	Nr. New Coating	71.6	67.4

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

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

Recalibration is due on : 29/09/2014

Royal Environment Auditing & Consultancy Service

*Analyst*  
Analyst



# Royal

## Environment Auditing & Consultancy Service

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

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

Ref. No. : 321/07/2014-15

Date: 01/08/2014

### 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 Sampling : 28/07/2014

Sr. No.	Parameters	Unit	GPCB limits	STP Inlet	STP Outlet
01.	pH	pH Unit	---	7.69	7.32
02.	BOD (3 Days at 27°C)	mg/l	<20	198	15
03.	Suspended Solids	mg/l	<30	192	24
04.	Residual Chlorine	mg/l	Min. 0.5	---	0.65

Royal Environment Auditing & Consultancy Service



*M. S. Chaudhary*  
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, 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 : 7th to 12th July, 2014

Sr. No	Location Operation monitored	Identified Contaminate	Sampling Instrument used	Airborne Contamination			TWA concentration (As given in Second Schedule) mg/m3	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						
1	Spiral Plant Nr. ID/OD	Total Dust	Personal Respirable Dust sampler APM 800	02	4-6	5.00	10	Gravimetric	7	---	<i>Ankit Dwivedi</i>	Mr. Ankit Dwivedi
2	JCO Plant Nr. JCO Press	Total Dust		02	3-5	4.00	10	Gravimetric	8	---		
3	Sinter Plant At First Floor	Total Dust		02	2-5	3.5	10	Gravimetric	7	---		
4	BF Plant (Cast House)	CO		02	6-8	6	2	Gravimetric	8	---		
		Total Dust			3-5	4.0	10					
5	Coating Plant-1 (Blasting Area)	Total Dust		02	4-5	4.5	10	Gravimetric	7	---		
6	DISP Plant Main Entrance	Total Dust		02	5-6	5.5	10	Gravimetric	9	---		
7	Spiral Plant -2 Nr. ID/OD	Total Dust		02	2-6	4.0	10	Gravimetric	8	---		
8	Coating Plant-2 (Blasting Area)	Total Dust		02	2.5-3.5	3.0	10	Gravimetric	8	---		
9	Coating Plant-3 (Blasting Area)	Total Dust		02	4-6	5.0	10	Gravimetric	9	---		
10	Small Dia Ductile Iron pipe	Total Dust	02	5-8	6.5	10	Gravimetric	9	---			

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

Calibration Date Due on : 02/12/2014