



Royal

Environment Auditing & Consultancy Service

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

Ref. No. : 300/09/2019-20

Date : 30/09/2019

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

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

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

NABL Certificate No. : TC 5948

Sr.No.	Particulars	Unit	Location No.1 : STP							
			1	2	3	4	5	6	7	8
01.	No. of Week	---								
02.	Date & Time Starting of Monitoring	---	02/09/19 09.30	07/09/19 09.10	09/09/19 09.25	13/09/19 09.10	16/09/19 09.35	20/09/19 09.15	23/09/19 09.40	27/09/19 09.05
03.	Date & Time Ending of Monitoring	---	03/09/19 09.30	08/09/19 09.10	10/09/19 09.25	14/09/19 09.10	17/09/19 09.35	21/09/19 09.15	24/09/19 09.40	28/09/19 09.05
04.	Duration of Sampling	Min	1440 00	1440 00	1440 00	1440 00	1440.00	1440.00	1440 00	1440 00
05.	Dominant Wind Direction (From)	---	SWS	W	WNW	W	WSW	NW	NW	SW
06.	Average Wind Speed	Km/Hr.	5.2	4.1	5.9	6.2	5.5	5.5	6.2	6.5
07.	Average flow rate for Dust Monitoring PM10	m ³ /min	1.12	1.15	1.20	1.15	1.18	1.11	1.14	1.10
08.	Average flow rate for Dust Monitoring PM2.5	m ³ /hr	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
09.	Average flow rate for Gas Monitoring	LPM	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
10.	Permissible limits for PM10*	µg/m ³	100	100	100	100	100	100	100	100
11.	Measured Concentration of PM10	µg/m ³	40	45	40	43	42	38	39	45
12.	Permissible limits for PM2.5*	µg/m ³	60	60	60	60	60	60	60	60
13.	Measured Concentration of PM2.5	µg/m ³	30	32	30	33	31	30	28	31
14.	Permissible limits for SO ₂ *	µg/m ³	80	80	80	80	80	80	80	80
15.	Measured Concentration of SO ₂	µg/m ³	9.8	9.9	10.3	10.8	10.5	12.6	13.5	14.2
16.	Permissible limits for NO ₂ *	µg/m ³	80	80	80	80	80	80	80	80
17.	Measured Concentration of NO ₂	µg/m ³	16.9	15.9	12.5	12.8	14.3	13.8	14.5	15.7
18.	Permissible limit for CO **	µg/m ³	2000	2000	2000	2000	2000	2000	2000	2000
19.	Measured Concentration of CO #	µg/m ³	BDL	BDL	BDL	BDL	BDL	BDL	B.D.L	B.D.L

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

Parameters are not covered in NABL Scope

Calibration done on : 05/05/2019

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



Analyst



Royal

Environment Auditing & Consultancy Service

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

Ref. No. : 301/09/2019-20

Date : 30/09/2019

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

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

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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	Location No.2 : Vikashpuram							
			1	2	3	4	5	6	7	8
01.	No. of Week	----								
02.	Date & Time Starting of Monitoring	---	02/09/19 09 45	07/09/19 09 25	09/09/19 09 40	13/09/19 09 30	16/09/19 09 50	20/09/19 09 35	23/09/19 09 55	27/09/19 09 25
03.	Date & Time Ending of Monitoring	---	03/09/19 09 45	08/09/19 09 25	10/09/19 09 40	14/09/19 09 30	17/09/19 09 50	21/09/19 09 35	24/09/19 09 55	28/09/19 09 25
04.	Duration of Sampling	Min.	1440 00	1440 00	1440 00	1440 00	1440 00	1440 00	1440 00	1440 00
05.	Dominant Wind Direction (From)	----	SWS	W	WNW	W	WSW	NW	NW	SW
06.	Average Wind Speed	Km/Hr.	5.3	3.9	6.9	7.3	7.3	4.5	7.3	6.9
07.	Average flow rate for Dust Monitoring PM10	m ³ /min	1.12	1.20	1.15	1.22	1.18	1.11	1.12	1.15
08.	Average flow rate for Dust Monitoring PM2.5	m ³ /hr.	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
09.	Average flow rate for Gas Monitoring	LPM	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
10.	Permissible limits for PM10*	µg/m ³	100	100	100	100	100	100	100	100
11.	Measured Concentration of PM10	µg/m ³	50	46	59	45	42	50	51	45
12.	Permissible limits for PM2.5*	µg/m ³	60	60	60	60	60	60	60	60
13.	Measured Concentration of PM2.5	µg/m ³	32	35	38	35	31	43	39	38
14.	Permissible limits for SO ₂ *	µg/m ³	80	80	80	80	80	80	80	80
15.	Measured Concentration of SO ₂	µg/m ³	10.3	9.5	10.3	9.3	9.1	12.3	12.5	12.8
16.	Permissible limits for NO ₂ *	µg/m ³	80	80	80	80	80	80	80	80
17.	Measured Concentration of NO ₂	µg/m ³	18.6	18.5	14.8	15.3	18.3	22.3	22.1	21.8
18.	Permissible limit for CO **	µg/m ³	2000	2000	2000	2000	2000	2000	2000	2000
19.	Measured Concentration of CO#	µg/m ³	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

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

Parameters are not covered in NABL Scope

Calibration done on : 05/05/2019

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



Royal

Environment Auditing & Consultancy Service

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

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

Ref. No. : 302/09/2019-20

Date : 30/09/2019

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

Name of company : JINDAL SAW LIMITED

Village: Samaghogha,

Tal : Mundra, Dist. Kutch

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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	Location No.3 : Nr. Spiral-II Pipe Storage Yard							
			1	2	3	4	5	6	7	8
01.	No. of Week	---								
02.	Date & Time Starting of Monitoring	---	02/09/19 08.45	07/09/19 08.55	09/09/19 08.40	13/09/19 08.45	16/09/19 08.55	20/09/19 08.35	23/09/19 08.50	27/09/19 08.55
03.	Date & Time Ending of Monitoring	---	03/09/19 08.45	08/09/19 08.55	10/09/19 08.40	14/09/19 08.45	17/09/19 08.55	21/09/19 08.35	24/09/19 08.50	28/09/19 08.55
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	---	SWS	W	WNW	W	WSW	NW	NW	SW
06.	Average Wind Speed	Km/Hr.	4.3	4.8	5.3	5.5	6.3	5.8	5.2	5.8
07.	Average flow rate for Dust Monitoring PM10	m ³ /min.	1.12	1.11	1.10	1.20	1.18	1.15	1.11	1.12
08.	Average flow rate for Dust Monitoring PM2.5	m ³ /hr.	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
09.	Average flow rate for Gas Monitoring	LPM	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
10.	Permissible limits for PM10*	µg/m ³	100	100	100	100	100	100	100	100
11.	Measured Concentration of PM10	µg/m ³	50	55	52	58	56	51	55	54
12.	Permissible limits for PM2.5*	µg/m ³	60	60	60	60	60	60	60	60
13.	Measured Concentration of PM2.5	µg/m ³	28	30	31	32	35	30	32	36
14.	Permissible limits for SO ₂ *	µg/m ³	80	80	80	80	80	80	80	80
15.	Measured Concentration of SO ₂	µg/m ³	10.5	10.2	11.3	11.8	11.1	11.2	12.3	11.5
16.	Permissible limits for NO ₂ *	µg/m ³	80	80	80	80	80	80	80	80
17.	Measured Concentration of NO ₂	µg/m ³	20.1	20.3	18.5	19.5	19.5	19.8	22.1	22.4
18.	Permissible limit for CO **	µg/m ³	2000	2000	2000	2000	2000	2000	2000	2000
19.	Measured Concentration of CO #	µg/m ³	BDL	BDL	BDL	BDL	BDL	BDL	B D L	B D L

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

Parameters are not covered in NABL Scope

Calibration done on : 05/05/2019

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

Omurrit
Analyst



Royal

Environment Auditing & Consultancy Service

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

Ref. No. : 303/09/2019-20

Date : 30/09/2019

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

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

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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	Location No.4 : Old Colony							
			1	2	3	4	5	6	7	8
01.	No. of Week	---								
02.	Date & Time Starting of Monitoring	---	02/09/19 08 30	07/09/19 08 40	09/09/19 08 25	13/09/19 08 30	16/09/19 08 45	20/09/19 08 20	23/09/19 08 35	27/09/19 08 40
03.	Date & Time Ending of Monitoring	---	03/09/19 08 30	08/09/19 08 40	10/09/19 08 25	14/09/19 08 30	17/09/19 08 45	21/09/19 08 20	24/09/19 08 35	28/09/19 08 40
04.	Duration of Sampling	Min.	1440 00	1440 00	1440 00	1440 00	1440 00	1440 00	1440 00	1440 00
05.	Dominant Wind Direction (From)	---	SWS	W	WNW	W	WSW	NW	NW	SW
06.	Average Wind Speed	Km/Hr.	5.2	5.2	5.1	6.1	5.8	5.1	4.8	5.8
07.	Average flow rate for Dust Monitoring PM10	m ³ /min	1.12	1.10	1.20	1.15	1.12	1.20	1.10	1.12
08.	Average flow rate for Dust Monitoring PM2.5	m ³ /hr.	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
09.	Average flow rate for Gas Monitoring	LPM	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
10.	Permissible limits for PM10*	µg/m ³	100	100	100	100	100	100	100	100
11.	Measured Concentration of PM10	µg/m ³	40	42	41	48	40	48	45	41
12.	Permissible limits for PM2.5*	µg/m ³	60	60	60	60	60	60	60	60
13.	Measured Concentration of PM2.5	µg/m ³	32	31	30	35	30	38	37	35
14.	Permissible limits for SO ₂ *	µg/m ³	80	80	80	80	80	80	80	80
15.	Measured Concentration of SO ₂	µg/m ³	13.6	14.3	15.1	14.2	14.5	11.2	11.8	10.9
16.	Permissible limits for NO ₂ *	µg/m ³	80	80	80	80	80	80	80	80
17.	Measured Concentration of NO ₂	µg/m ³	15.8	18.6	22.1	17.1	20.3	20.3	20.1	22.1
18.	Permissible limit for CO **	µg/m ³	2000	2000	2000	2000	2000	2000	2000	2000
19.	Measured Concentration of CO #	µg/m ³	BDL	BDL	BDL	BDL	BDL	BDL	B D L	B D L

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

Parameters are not covered in NABL Scope

Calibration done on 05/05/2019

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

Blurred signature
Analyst



Royal

Environment Auditing & Consultancy Service

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

Ref. No. :304/09/2019-20

Date : 30/09/2019

FUGITIVE EMISSION MONITORING REPORT

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

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

Sr. No.	Particulars	Unit	A - 2
01.	Location of Ambient	----	BF-2 Cast House
02.	Date of sampling	----	11/09/2019
03.	Time of sampling	----	9.20
04.	Duration of Sampling	Hr.	8.00
05.	Dominant Wind Direction (From)	----	SSE
06.	Average Wind Speed	Km/Hr.	5.5
07.	Average flow rate during sampling	m ³ /Hr.	1.1
08.	Average flow rate for Gas sampling	LPM	0.2
09.	Permissible limits for PM 10*	µg/m ³	3000
10.	Measured Concentration of PM 10	µg/m ³	1155
11.	Permissible limits for SO ₂ *	µg/m ³	150
12.	Measured Concentration of SO ₂	µg/m ³	12.3
13.	Permissible limits for NO ₂ *	µg/m ³	120
14.	Measured Concentration of NO ₂	µg/m ³	20.3
15.	Permissible limit for CO **	µg/m ³	2000
16.	Measured Concentration of CO #	µg/m ³	BDL
17.	Permissible limit for Pb*	µg/m ³	2
18.	Measured Concentration of Pb #	µg/m ³	ND

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

Parameters are not covered in NABL Scope
ND= Not Detectable

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 Email : royaleenvironment@live.com admin@royalconsultancy.com

Ref. No. :305/08/2019-20

Date : 30/09/2019

FUGITIVE EMISSION MONITORING REPORT

Name of company : JINDAL SAW LIMITED

Village: Samaghogha,

Tal. : Mundra, Dist. Kutch

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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	A - 1
01.	Location of Ambient	----	Sinter-1 Ground Hopper
02.	Date of sampling	----	05/09/2019
03.	Time of sampling	----	9.40
04.	Duration of Sampling	Hr.	8.00
05.	Dominant Wind Direction (From)	----	SSE
06.	Average Wind Speed	Km/Hr.	5.2
07.	Average flow rate during sampling	m ³ /Hr.	1.0
08.	Average flow rate for Gas sampling	LPM	0.2
09.	Permissible limits for PM 10*	µg/m ³	3000
10.	Measured Concentration of PM 10	µg/m ³	1150
11.	Permissible limits for SO ₂ *	µg/m ³	150
12.	Measured Concentration of SO ₂	µg/m ³	17.5
13.	Permissible limits for NO ₂ *	µg/m ³	120
14.	Measured Concentration of NO ₂	µg/m ³	22.3
15.	Permissible limit for CO **	µg/m ³	2000
16.	Measured Concentration of CO #	µg/m ³	BDL
17.	Permissible limit for Pb*	µg/m ³	2
18.	Measured Concentration of Pb #	µg/m ³	ND

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

BDL= Below Detectable Limit

Calibration done on : 05/05/2019

ND= Not Detectable

Parameters are not covered in NABL Scope

Royal Environment Auditing & Consultancy Service

Dhruv
Analyst



Royal

Environment Auditing & Consultancy Service

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

Ph. +91 281 2360695 Email : royaienvironment@iive.com admin@royalconsultancy.com

Ref. No. :306/08/2019-20

Date : 30/09/2019

FUGITIVE EMISSION MONITORING REPORT

Name of company : JINDAL SAW LIMITED

Village: Samaghogha,

Tal. : Mundra, Dist. Kutch

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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	A - 5
01.	Location of Ambient	----	SINTER RMH YARD
02.	Date of sampling	----	12/09/2019
03.	Time of sampling	----	9.50
04.	Duration of Sampling	Hr.	8.00
05.	Dominant Wind Direction (From)	----	NE
06.	Average Wind Speed	Km/Hr.	4.9
07.	Average flow rate during sampling	m ³ /Hr.	1.2
08.	Average flow rate for Gas sampling	LPM	0.2
09.	Permissible limits for PM 10*	µg/m ³	3000
10.	Measured Concentration of PM 10	µg/m ³	1320
11.	Permissible limits for SO ₂ *	µg/m ³	150
12.	Measured Concentration of SO ₂	µg/m ³	14.1
13.	Permissible limits for NO ₂ *	µg/m ³	120
14.	Measured Concentration of NO ₂	µg/m ³	16.5
15.	Permissible limit for CO **	µg/m ³	2000
16.	Measured Concentration of CO #	µg/m ³	BDL
17.	Permissible limit for Pb*	µg/m ³	2
18.	Measured Concentration of Pb #	µg/m ³	ND

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

Calibration done on : 05/05/2019

Parameters are not covered in NABL Scope

Royal Environment Auditing & Consultancy Service



Chavhan
Analyst



Royal

Environment Auditing & Consultancy Service

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

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

Ref. No. :307/08/2019-20

Date : 30/09/2019

FUGITIVE EMISSION MONITORING REPORT

Name of company : JINDAL SAW LIMITED

Village: Samaghogha,

Tal. : Mundra, Dist. Kutch

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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	A - 6
01.	Location of Ambient	---	BF-1 Dedusting System
02.	Date of sampling	---	05/09/2019
03.	Time of sampling	---	10.10
04.	Duration of Sampling	Hr.	8.00
05.	Dominant Wind Direction (From)	---	SE
06.	Average Wind Speed	Km/Hr.	5.2
07.	Average flow rate during sampling	m ³ /Hr.	1.1
08.	Average flow rate for Gas sampling	LPM	0.2
09.	Permissible limits for PM 10*	µg/m ³	3000
10.	Measured Concentration of PM 10	µg/m ³	1240
11.	Permissible limits for SO ₂ *	µg/m ³	150
12.	Measured Concentration of SO ₂	µg/m ³	11.3
13.	Permissible limits for NO ₂ *	µg/m ³	120
14.	Measured Concentration of NO ₂	µg/m ³	15.1
15.	Permissible limit for CO **	µg/m ³	2000
16.	Measured Concentration of CO #	µg/m ³	BDL
17.	Permissible limit for Pb*	µg/m ³	2
18.	Measured Concentration of Pb #	µg/m ³	ND

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

Calibration done on : 05/05/2019

Parameters are not covered in NABL Scope

Royal Environment Auditing & Consultancy Service



Bhuvra
Analyst



Royal

Environment Auditing & Consultancy Service

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

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

Ref. No. : 308/09/2019-20

Date : 30/09/2019

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

Name of Company : JINDAL SAW LIMITED,

Village: Samaghogha,

Tal. : Mundra, Dist. Kutch

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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	S - 3
01	Date of Sampling	---	05-09-2019
02	Attached to	---	Sinter Furnace
03	Stack Height	Meter	50
04	Stack Diameter	Meter	2.0
05	Stack Temperature	°C	151
06	Ambient Temperature	°C	30
07	Average Velocity of Flue Gases	m/sec.	15.20
08	IsoKinetic Flowrate for Sampling	LPM	12
09	PM Concentration in Inlet	mg/Nm ³	1298
10	PM Concentration in Outlet	mg/Nm ³	48.3
11	Efficiency	%	96.28

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

Calibration Done On. : 13/09/2018

Royal Environment Auditing & Consultancy Service



Chhavi
Analyst



Royal

Environment Auditing & Consultancy Service

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

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

Ref. No. : 307/09/2019-20

Date : 30/09/2019

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

Name of company : JINDAL SAW LIMITED,

Village: Samaghogha,

Tal. : Mundra, Dist. Kutch

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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	S-15	S - 13
01	Date of Sampling	---	04-09-2019	03-09-2019
02	Attached to	---	Discharging End of Sinter de-dusting system	Sinter Furnace
03	Stack Height	Meter	50	50
04	Stack Diameter	Meter	1.3	2.0
05	Stack Temperature	°C	155	148
06	Ambient Temperature	°C	32	31
07	Average Velocity of Flue Gases	m/sec.	8.88	7.2
08	IsoKinetic Flowrate for Sampling	LPM	12	10
09	PM Concentration in Inlet	mg/Nm ³	1235.5	1440
10	PM Concentration in Outlet	mg/Nm ³	62.8	32.5
11	Efficiency	%	94.92	97.74

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

Calibration Done On. : 13/09/2018

Royal Environment Auditing & Consultancy Service



Dhruv
Analyst



Royal

Environment Auditing & Consultancy Service

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

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

Ref. No. : 309/09/2019-20

Date : 30/09/2019

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

Name of company : JINDAL SAW LIMITED,

Village: Samaghogha,

Tal. : Mundra, Dist. Kutch

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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	S - 49
01	Date of Sampling	---	02/09/2019
02	Attached to	---	Dedusting System 2 BF
03	Stack Height	Meter	40
04	Stack Duct Diameter	Meter	1.5
05	Stack Temperature	°C	36
06	Ambient Temperature	°C	30
07	Average Velocity of Flue Gases	m/sec.	9.54
08	IsoKinetic Flowrate for Sampling	LPM	17
09	Inlet	mg/Nm ³	985
10	Outlet	mg/Nm ³	40.2
11	Efficiency	%	95.92

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

Calibration Done On. : 13/09/2018

Royal Environment Auditing & Consultancy Service



Blurred
Analyst



Royal

Environment Auditing & Consultancy Service

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

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

Ref. No. : 309/09/2019-20

Date : 30/09/2019

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

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

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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	S - 44
01	Date of Sampling	---	04/09/2019
02	Attached to	---	Dedusting System BF 1
03	Stack Height	Meter	35.0
04	Stack Duct Diameter	Meter	1.5
05	Stack Temperature	°C	36
06	Ambient Temperature	°C	31
07	Average Velocity of Flue Gases	m/sec.	9.22
08	IsoKinetic Flowrate for Sampling	LPM	17
09	Inlet	mg/Nm ³	880
10	Outlet	mg/Nm ³	16.5
11	Efficiency	%	98.13

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

Calibration Done On. : 13/09/2018

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 Email : royaleenvironment@live.com admin@royalconsultancy.com

Ref. No. : 310/09/2019-20

Date : 30/09/2019

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

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

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

NABL Certificate No. : TC 5948

Sr.No.	Particulars	Unit	S - 24	S - 31	S - 36	S - 39
01	Date of Sampling	---	07/09/2019	06/09/2019	11/09/2019	11/09/2019
02	Attached to	---	Mg Converter I&II	Zn Coating - II	Zn Coating - III	Zn Coating - IV & V
03	Stack Height	Meter	32	30	30	30
04	Stack Diameter	Meter	0.9	0.5	0.5	0.5
05	Stack Temperature	°C	46	35	35	35
06	Ambient Temperature	°C	30	30	30	30
07	Average Velocity of Flue Gases	m/sec.	5.25	7.56	10.2	9.4
08	IsoKinetic Flowrate for Sampling	LPM	9	14	19	17
09	PM Concentration in Inlet	mg/Nm ³	405.2	611.5	488	615
10	PM Concentration in Outlet	mg/Nm ³	36.2	15.5	17.5	12
11	Efficiency	%	91.07	97.47	96.41	98.05

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

Calibration Done On. : 13/09/2018

Royal Environment Auditing & Consultancy Service



Dhruv
Analyst



Royal

Environment Auditing & Consultancy Service

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

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

Ref. No. : 311/09/2019-20

Date : 30/09/2019

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

Name of company : JINDAL SAW LIMITED,

Village: Samaghogha,

Tal. : Mundra, Dist. Kutch

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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	S-58	S-62	S-65
01	Date of Sampling	---	05/09/2019	06/09/2019	12/09/2019
02	Attached to	---	Mg Treatment	Zinc Coating	Zinc Coating FL-7
03	Stack Height	Meter	30	30	30
04	Stack Duct Diameter	Meter	0.5	1	1
05	Stack Temperature	°C	46	40	35
06	Ambient Temperature	°C	32	30	30
07	Average Velocity of Flue Gases	m/sec.	9.11	8.88	9.11
08	IsoKinetic Flowrate for Sampling	LPM	16	16	17
09	PM Concentration in Inlet	mg/Nm ³	1125	354.5	411.2
10	PM Concentration in Outlet	mg/Nm ³	26.2	20.1	16.2
11	Efficiency	%	97.67	94.33	96.06

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

Calibration Done On. : 13/09/2018



Royal Environment Auditing & Consultancy Service



Royal

Environment Auditing & Consultancy Service

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

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

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

Date : 30/09/2019

STACK EMISSION MONITORING RESULTS Sinter Plant - 1(GPCB ID:35456)

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

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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	S - 2	S - 3	S - 4	S - 5	S - 6
01	Date of Sampling	---	05/09/2019	05/09/2019	05/09/2019	07/09/2019	07/09/2019
02	Time of sampling	---	12.15	9.45	10.30	10.45	11.50
03	Stack Attached to	---	Fuel & Flux Crushing House	Sinter Furnace	Primary Mixture House	Secondary Mixture House	Discharge End
04	Air Pollution Control Measures	---	Bag Filter	ESP	....	....	ESP
05	Stack Height	Meter	27.00	50	19.75	36.08	32
06	Stack Diameter	Meter	1.40	2.0	1.25	1.25	1.30
07	Stack Temperature	°C	36	151	36	34	144
08	Ambient Temperature	°C	37	30	31	31	31
09	Average Velocity of Flue Gases	m/sec.	6	15.20	7.15	4.10	9.20
10	Isokinetic flow rate for P.M. Sampling	LPM	12	12	13	8	13
11	Gaseous Sampling Flow Rate	LPM	NA	2.0	NA	NA	NA
12	Permissible limits for PM	mg/Nm ³	150	150	150	150	150
13	Measured Concentration of PM	mg/Nm ³	22	48.3	19.0	15.5	47
14	Permissible limits for SO ₂	ppm	NA	100	NA	NA	NA
15	Measured Concentration of SO ₂	ppm	...	10.3	....	....	....
16	Permissible limits for NO _x	ppm	NA	50	NA	NA	NA
17	Measured Concentration of NO _x	ppm	....	21.4	....	....	....

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

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

Calibration Done On : 13/09/2018

NA= Not Applicable

ND=Not Detectable

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 Email : royalsenvironment@live.com admin@royalconsultancy.com

Ref. No. : 313/09/2019-20

Date : 30/09/2019

STACK EMISSION MONITORING RESULTS Sinter Plant -2 (GPCB ID:29017)

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

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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	S - 12	S - 7	S - 3	S - 16	S - 13	S - 15
01	Date of Sampling	---	04/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019	04/09/2019
02	Time of sampling	Hr.	11.15	10.15	11.15	12.10	14.45	10.35
03	Stack Attached to	---	Secondary Mixer House	Fuel crushing de-duster system (Flux)	Fuel Screening deduster System (Flux Screening)	Primary Mixer Drum	Sinter Furnace	Discharging End of sinter de-dusting system
04	Air Pollution Control Measures	---	Dust Collector	Dust Collector	Dust Collector	Dust Collector	ESP	ESP
05	Stack Height	Meter	30	30	30	20	50	50
06	Stack Diameter	Meter	0.7	0.7	0.7	0.7	2	1.3
07	Stack Temperature	°C	37	45	42	36	135	145
08	Ambient Temperature	°C	31	31	31	31	31	31
09	Average Velocity of Flue Gases	m/sec.	3.50	6.35	7.25	2.45	7.05	8.35
10	Isokinetic flow rate for P.M. Sampling	LPM	6	11	13	5	10	11
11	Gaseous Sampling Flow Rate	LPM	NA	NA	NA	NA	2.0	NA
12	Permissible limits for PM	mg/Nm ³	150	150	150	150	150	150
13	Measured Concentration of PM	mg/Nm ³	14.2	13.7	19	24.1	32.5	62.8
14	Permissible limits for SO ₂	ppm	NA	NA	NA	NA	100	NA
15	Measured Concentration of SO ₂	ppm	---	---	---	---	6.5	---
16	Permissible limits for NO _x	ppm	NA	NA	NA	NA	50	NA
17	Measured Concentration of NO _x	ppm	---	---	---	---	20.1	---

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

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

Calibration Done On : 13/09/2018

NA= Not Applicable

ND= Not Detectable


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 Email : royaleenvironment@live.com admin@royalconsultancy.com

Ref. No. : 314/09/2019-20

Date : 30/09/2019

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

Name of company : JINDAL SAW LIMITED,

Village: Samaghogha,

Tal. : Mundra, Dist. Kutch

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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	S - 44	S - 45	S - 46
01	Date of Sampling	---	04/09/2019	04/09/2019	04/09/2019
02	Time of sampling	Hr.	9.45	10.50	12.15
03	Stack Attached to	---	Dedusting System	Boiler - I	Boiler - II
04	Air Pollution Control Measures	---	Bag Filter	---	---
05	Stack Height	Meter	35.0	45	45
06	Stack Diameter	Meter	1.5	1.4	1.4
07	Stack Temperature	°C	34	132	144
08	Ambient Temperature	°C	30	30	30
09	Average Velocity of Flue Gases	m/sec.	8.32	9.80	8.20
10	Isokinetic flow rate for P.M. Sampling	LPM	15	14	11
11	Gaseous Sampling Flow Rate	LPM	2.0	2.0	2.0
12	Permissible limits for PM	mg/Nm ³	150	150	150
13	Measured Concentration of PM	mg/Nm ³	16.5	1.0	3.4
14	Permissible limits for SO ₂	ppm	100	100	100
15	Measured Concentration of SO ₂	ppm	ND	7.6	7.9
16	Permissible limits for NO _x	ppm	50	50	50
17	Measured Concentration of NO _x	ppm	ND	13.2	12.4
18	Permissible limits for CO vol/vol	%	N.A.	1 % Max.	1 % Max.
19	Measured Concentration of CO vol/vol #	%	ND	0.1	0.2

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

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

Calibration Done On : 13/09/2018

Parameters are not covered in NABL Scope

N D=Not Detectable

N A =Not Applicable



Phurax
Analyst



Royal

Environment Auditing & Consultancy Service

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

Ref. No. : 315/09/2019-20

Date : 30/09/2019

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

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

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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	S - 49	S - 53
01	Date of Sampling	---	02/09/2019	02/09/2019
02	Time of sampling	Hr.	10.45	12.10
03	Stack Attached to	---	Dedusting System	Iron Ore fine & Dust Collecting System
04	Air Pollution Control Measures	---	Bag Filter	Bag Filter
05	Stack Height	Meter	40.0	30.0
06	Stack Diameter	Meter	1.5	0.35
07	Stack Temperature	°C	36	35
08	Ambient Temperature	°C	31	31
09	Average Velocity of Flue Gases	m/sec.	7.25	6.15
10	Isokinetic flow rate for P.M. Sampling	LPM	13	11
11	Gaseous Sampling Flow Rate	LPM	NA	NA
12	Permissible limits for PM	mg/Nm ³	150	150
13	Measured Concentration of PM.	mg/Nm ³	40.2	34.2
14	Permissible limits for SO ₂	mg/Nm ³	NA	NA
15	Measured Concentration of SO ₂	mg/Nm ³	---	---
16	Permissible limits for No _x	mg/Nm ³	NA	NA
17	Measured Concentration of NO _x	mg/Nm ³	---	---

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

NA=Not Applicable

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

Calibration Done On : 13/09/2018

Royal Environment Auditing & Consultancy Service



Chatur
Analyst



Royal

Environment Auditing & Consultancy Service

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

Ref. No. : 317/09/2019-20

Date : 30/09/2019

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

Name of company : JINDAL SAW LIMITED,

Village: Samaghogha,

Tal. : Mundra, Dist. Kutch

NABL Certificate No. : TC 5948

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

Sr. No.	Particulars	Unit	S - 17	S - 18	S - 19	S - 28
01	Date of Sampling	---	10/09/2019	10/09/2019	10/09/2019	10/09/2019
02	Time of sampling	Hr.	10.30	11.35	12.45	14.25
03	Stack Attached to	---	Core Shop-I	Core Shop-II	Core Shop-III	Core Cleaning & Dusting-I
04	Air Pollution Control Measures	---	---	---	---	Bag Filter
05	Stack Height	Meter	30	30	30	30
06	Stack Diameter	Meter	0.584	0.58	0.584	0.6
07	Stack Temperature	°C	34	32	32	33
08	Ambient Temperature	°C	30	30	30	30
09	Average Velocity of Flue Gases	m/sec.	4.8	5.0	4.4	9.1
10	Isokinetic flow rate for P.M. Sampling	LPM	9	9	8	15
11	Gaseous Sampling Flow Rate	LPM	2.0	2.0	2.0	2.0
12	Permissible limits for PM	mg/Nm ³	150	150	150	150
13	Measured Concentration of PM	mg/Nm ³	12.0	18.0	16	18
14	Permissible limits for SO ₂	mg/Nm ³	40	40	40	40
15	Measured Concentration of SO ₂	mg/Nm ³	4.6	4.5	3.9	ND
16	Permissible limits for NO _x	mg/Nm ³	25	25	25	25
17	Measured Concentration of NO _x	mg/Nm ³	8.4	6.9	8.1	6.1

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

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

Calibration Done On. : 13/09/2018

Royal Environment Auditing & Consultancy Service



Bhuvnesh
Analyst



Royal

Environment Auditing & Consultancy Service

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

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

Ref. No. : 318/09/2019-20

Date : 30/09/2019

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

Name of company : JINDAL SAW LIMITED,

Village: Samaghogha,

Tal. : Mundra, Dist. Kutch

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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	S - 25	S - 31	S - 36	S - 39
01	Date of Sampling	---	06/09/2019	06/09/2019	11/09/2019	11/09/2019
02	Time of sampling	Hr.	10.10	10.00	12.10	11.15
03	Stack Attached to	---	Zn Coating - I	Zn Coating - II	Zn Coating - III	Zn Coating - IV & V
04	Air Pollution Control Measures	---	Cyclone Separator & Bag Filter	Cyclone Separator & Bag Filter	Cyclone Separator & Bag Filter	Cyclone Separator & Bag Filter
05	Stack Height	Meter	30	30	30	30
06	Stack Diameter	Meter	0.6	0.6	0.6	0.6
07	Stack Temperature	°C	33	34	33	34
08	Ambient Temperature	°C	31	31	30	30
09	Average Velocity of Flue Gases	m/sec.	5.15	6.88	7.5	8.1
10	Isokinetic flow rate for P.M. Sampling	LPM	10	13	14	15
11	Gaseous Sampling Flow Rate	LPM	---	---	---	---
12	Permissible limits for PM	mg/Nm ³	20 (Zn)	20 (Zn)	20 (Zn)	20 (Zn)
13	Measured Concentration of PM	mg/Nm ³	14.2	15.5	17.5	12
14	Permissible limits for SO ₂	mg/Nm ³	NA	NA	NA	NA
15	Measured Concentration of SO ₂	mg/Nm ³	---	---	---	---
16	Permissible limits for NO _x	mg/Nm ³	NA	NA	NA	NA
17	Measured Concentration of NO _x	mg/Nm ³	---	---	---	---

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

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

#REF!

NA=Not Applicable

NA=Not Applicable

Royal Environment Auditing & Consultancy Service



Bhuvnesh
Analyst



Royal

Environment Auditing & Consultancy Service

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

Ref. No. : 319/09/2019-20

Date : 30/09/2019

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

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

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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	S - 29	S - 24	S - 23	S - 19
01	Date of Sampling	---	10/09/2019	07/09/2019	07/09/2019	10/09/2019
02	Time of sampling	Hr.	11.10	10.30	15.20	10.30
03	Stack Attached to	---	Annealing Furnace - I	Common Stack Mg Converter-I & II	Sand Reclamation	Annealing Furnace - II
04	Air Pollution Control Measures	---	---	Bag Filter	Bag Filter	---
05	Stack Height	Meter	32	30	30	32
06	Stack Diameter	Meter	1.375	0.5	0.9	1.375
07	Stack Temperature	°C	114	48	74	95
08	Ambient Temperature	°C	30	31	31	31
09	Average Velocity of Flue Gases	m/sec.	5.05	8.2	7.11	6.2
10	Isokinetic flow rate for P.M. Sampling	LPM	7	14	12	10
11	Gaseous Sampling Flow Rate	LPM	2.0	---	2.0	2.0
12	Permissible limits for PM	mg/Nm ³	150	150	150	150
13	Measured Concentration of PM	mg/Nm ³	12.5	36.2	32.5	10.5
14	Permissible limits for SO ₂	mg/Nm ³	100 (PPM)	40	40	100 (PPM)
15	Measured Concentration of SO ₂	mg/Nm ³	3.6	ND	3.9	1.5
16	Permissible limits for NO _x	mg/Nm ³	50 (PPM)	25	25	50 (PPM)
17	Measured Concentration of NO _x	mg/Nm ³	8.5	4.1	20	9.1 (PPM)

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

N.D= Not Detectable

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

Calibration Done On, : 13/09/2018



Royal

Environment Auditing & Consultancy Service

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

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

Ref. No. : 320/09/2019-20

Date : 30/09/2019

STACK EMISSION MONITORING RESULTS Pipe Plant (SDP-2) (GPCB ID:18036)

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

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

NABL Certificate No. : TC 5948

Sr. No.	Particulars	Unit	S - 58	S - 59	S - 62	S - 63	S - 60	S - 65
01	Date of Sampling	---	05/09/19	09/09/19	06/09/19	06/09/19	09/09/19	12/09/19
02	Time of sampling	Hr.	14.30	11.20	12.10	14.20	10.15	15.20
03	Stack Attached to	---	Magnesium Treatment	Socket Cleaning	Zinc Coating	Tri- Grinding Section	Annealing Furnace -1	Zinc Coating Machine (FL-7)
04	Air Pollution Control Measures	---	Bag Filter	Bag Filter	Bag Filter	Bag Filter	---	Cyclone Separator & Bag Filter
05	Stack Height	Meter	30	30	30	30	32	30
06	Stack Diameter	Meter	1.00	0.50	1.00	1.00	1.375	1.20
07	Stack Temperature	°C	38	34	35	33	112	34
08	Ambient Temperature	°C	30	31	31	31	31	30
09	Average Velocity of Flue Gases	m/sec	6.25	7.05	5.25	2.60	6.85	5.88
10	Isokinetic flow rate for PM Sampling	LPM	11	13	10	5	10	11
11	Gaseous Sampling Flow Rate	LPM	---	---	---	---	2.0	---
12	Permissible limits for PM	mg/Nm ³	50	50	50 (Zn)	50	150	50 (Zn)
13	Measured Concentration of PM	mg/Nm ³	26.2	13.2	20.1	32.4	15.5	16
14	Permissible limits for SO ₂	PPM	NA	NA	NA	NA	100 (PPM)	NA
15	Measured Concentration of SO ₂	PPM	---	---	---	---	4.5	---
16	Permissible limits for NO _x	PPM	NA	NA	NA	NA	50 (PPM)	NA
17	Measured Concentration of NO _x	PPM	---	---	---	---	15.1	---

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

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

Calibration Done On : 13/09/2018

ND= Not Detectable

N.A= Not Applicable

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 Email : royalsenvironment@live.com admin@royalconsultancy.com

Ref. No. : 328/09/2019-20

Date : 30/09/2019

WORK ZONE NOISE LEVEL MEASUREMENT SINTER PLANT- 1 (GPCB ID:35456)

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

Date of sampling : 24th September, 2019

Sr. No.	Location of Sampling	Value in dB(A)		
		Min.	Max.	Leq
1	Inside Control Room	45.3	62.1	54.8
2	Near Flux Crushing Building	54.3	64.2	60.5
3	Sinter Machine area	44.8	60.3	52.5

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

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

Calibration Done On. : 13/09/2018

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 Email : royalservice@live.com admin@royalconsultancy.com

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

Date : 30/09/2019

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

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

Date of sampling : 24th September, 2019

Sr. No.	Location of Sampling	Value in dB(A)		
		Min.	Max.	Leq
01.	Stock House	58.6	75.5	65.3
02.	Inside BF Control Room	50.3	53.2	52.1
03.	Cast House	44.3	62.5	55.2
04.	Inside Laboratory	40.3	52.3	48.5
05.	Inside Control Room of Blower House	52.3	58.9	53.1
06.	Inside Control Room of CPP	44.1	57.9	52.3

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

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

Calibration Done On. : 13/09/2018

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 Email : royalservice@live.com admin@royalconsultancy.com

Ref. No. : 330/09/2019-20

Date : 30/09/2019

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

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

Date of sampling : 24th September, 2019

Sr. No.	Location of Sampling	Value in dB(A)		
		Min.	Max.	Leq
01.	Inside Control Room of Annealing Furnace of DISP	42.3	55.3	48.3
02	Inside Control Room – Mill Area of Spiral Plant	55.6	66.3	62.3
03	JCO Plant- Finishing area	48.3	54.3	51.2
04	Nr. CCM area of DISP Plant	54.2	63.2	55.1
05	Nr. CCM area of SDP-2	56.2	72.3	68.4
06	Inside Control Room of Annealing Furnace of SDP-2	70.2	74.3	71.2
07	Control room of DISP Cement Lining	56.9	62.3	59.2
08	Zinc Coating of FL-7 control room	62.8	73.1	70.8
09	Control room of IFBE Coating Plant	55.2	72.3	65.3
10	Mould Shop control room	60.5	74.1	66.7

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

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

Calibration Done On. : 13/09/2018

Royal Environment Auditing & Consultancy Service



Bhurat
Analyst



Royal

Environment Auditing & Consultancy Service

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

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

Ref. No. : 331/09/2019-20

Date : 30/09/2019

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

Name of company : JINDAL SAW LIMITED,

Village: Samaghogha,

Tal. : Mundra, Dist. Kutch

Date of sampling : 24th September, 2019

Sr. No.	Location of Sampling	Value in dB(A)		
		Min.	Max.	Leq
01.	Inside BF Control Room	44.2	65.3	58.2
02.	Stock House	54.9	69.5	61.1
03.	Cast House	50.2	66.3	59.2

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

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

Calibration Done On. : 13/09/2018

Royal Environment Auditing & Consultancy Service

Bhargava
Analyst



Royal

Environment Auditing & Consultancy Service

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

Ref. No. : 332/09/2019-20

Date : 30/09/2019

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

Name of company : JINDAL SAW LIMITED,

Village: Samaghogha,

Tal. : Mundra, Dist. Kutch

Date of sampling : 24th September, 2019

Sr. No.	Location of Sampling	Value in dB(A)		
		Min.	Max.	Leq
01.	Inside Control Room	45.3	68.2	55.3
02.	Sinter Machine area	48.3	65.2	55.8
03.	Near Proportioning Building	52.8	66.9	60.3
04.	Near Crusher House	55.2	70.1	64.2

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

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

Calibration Done On : 13/09/2018

Royal Environment Auditing & Consultancy Service

Bhuprat
Analyst



Royal

Environment Auditing & Consultancy Service

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

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

Ref. No. : 333/09/2019-20

Date : 30/09/2019

AMBIENT NOISE LEVEL MEASUREMENT

Name of company : JINDAL SAW LIMITED,

Village: Samaghogha,

Tal. : Mundra, Dist. Kutch

Date of sampling : 24th September, 2019

Sr. No.	Location of Sampling	Value in dB(A) Day Time			Value in dB(A) Night Time		
		Min.	Max.	Leq	Min.	Max.	Leq
01.	Admin. Building	44.3	60.3	55.3	42.3	72.3	54.1
02.	OHC	46.8	62.3	54.3	43.5	62.5	53.2
03.	New Colony (School)	44.8	58.3	51.3	45.6	56.8	49.2
04.	Behind FL-7	55.6	69.3	55.9	55.8	65.4	54.2
05.	Nr. Sinter Plant-1 Canteen	62.3	72.3	61.3	53.1	52.5	59.2
06.	Blast Furnace RMHS	52.9	65.3	60.3	58.3	64.3	59.1
07.	Spiral-2-Behind work shop	55.3	65.2	58.3	49.3	61.3	57.2
08.	Chairman Bungalow	57.6	64.3	56.9	42.3	53.1	53.2
09.	301 Yard	54.3	66.4	63.2	55.8	66.8	64.2
10.	Guest House	45.6	65.8	55.2	52.9	63.8	53.2
11.	Harvesting pond	54.5	66.4	59.8	54.6	64.8	56.1

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

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

Calibration Done On. : 13/09/2018

Royal Environment Auditing & Consultancy Service



Bhuvan
Analyst



Royal

Environment Auditing & Consultancy Service

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

Ref. No. : 334/09/2019-20

Date : 30/09/2019

REPORT OF DOMESTIC WASTE WATER ANALYSIS

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

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

Date of Sampling : 27/09/2019

Test Method : As per IS Standards - 3025

NABL Certificate No. : TC 5948

Sr. No.	Parameters	Unit	GPCB limits for Treated Effluent	Raw Sewage	Treated Effluent
01.	pH	pH Unit	6.5 to 9.0	7.2	7.95
02.	BOD (3 Days at 27°C)	mg/l	30	110	11
03.	Total Dissolve Solid	mg/l	...	1640	1450
04.	COD	mg/l	...	175	15
05.	Total Suspended Solid	mg/l	100	116	15
06.	Oil & Grease	mg/l	...	ND	ND
07.	Fecal Coliform #	MPN/100ml	1000	NA	Absent
08.	Residual Chlorine #	mg/l	Min. 0.5	NA	0.55

Parameters are not covered in NABL Scope

Royal Environment Auditing & Consultancy Service



Shurmit
Analyst



Royal

Environment Auditing & Consultancy Service

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

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

Ref. No. : 335/09/2019-20

Date : 30/09/2019

WATER & WASTE WATER QUALITY ANALYSIS REPORT

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

Source of Sample : Effluent Treatment Plant

Date of Sampling : 27/09/2019

NABL Certificate No. : TC 5948

Sr. No.	Parameters	Unit	Permissible limit	Results
01.	pH	...	6.5 to 8.5	6.95
02.	Colour	pt.co.units	100	9
03.	Temperature	°C	40	34
04.	Total suspended solids	mg/l	100	14
05.	Total dissolve solids	mg/l	2100	1750
06.	Phenolic compounds	mg/l	1	ND
07.	Oil & Grease	mg/l	10	ND
08.	Chlorides	mg/l	600	550
09.	Sulphate	mg/l	1000	135.3
10.	Ammonical nitrogen (as NH ₃ -N)	mg/l	50	6.8
11.	BOD (3 Days at 27°C)	mg/l	30	15.2
12.	COD	mg/l	100	53.4


Form No. 37

(Prescribed under Rule 12-B)

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

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

Date of Sampling : 04th September, 2019

Sr. No	Location Operation monitored	Identified Contaminate	Sampling Instrument used	Airborne Contamination			TWA concentration (As given in Second Schedule)	Reference Method	Number of workers exposed at the location being monitored	Remarks	Signature of person taking samples	Name (in block letters)
				Number of sample	Range	Average						
1	Sinter Plant-2 (Sinter Machine area)	Total Dust	Personal Respirable Dust sampler VPDS 203	02	1.4-2.2	1.80	10	Gravimetric	6	---		Mr. Bharat Kalsariya

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

Calibration Done on. : 11/03/2019

For. Royal Environment Auditing & Consultancy Service




Authorized Sign


Form No. 37

(Prescribed under Rule 12-B)

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

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

Date of Sampling :2nd September, 2019

Sr.No.	Location Operation monitored	Identified Contaminate	Sampling Instrument used	Airborne Contamination			TWA Concentration (As given in Second Schedule)	Reference Method	Number of workers exposed at the location being monitored	Remark	Signature of person taking samples	Name (in block letters)
				Number of sample	Range	Average						
1	Sinter Plant-1 (Sinter Machine area)	Total Dust	Personal Respirable Dust sampler VPDS 203	02	1.4-2.6	2.0	10	Gravimetric	5	----		Mr. Bharat Kalsariya

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

Calibration Done on. : 11/03/2019

For. Royal Environment Auditing & Consultancy Service



Authorized Sign

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

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

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

Date of Sampling : 9th, 10th, 11th & 14th September, 2019

Sr. No	Location Operation monitored	Identified Contaminate	Sampling Instrument used	Airborne Contamination			TWA Concentration (As given in Second Schedule)	Reference Method	Number of workers exposed at the location being monitored	Remark	Signature of person taking samples	Name (in block letters)
				Number of sample	Range	Average						
1	Spiral Plant-2 (Nr. ID/OD)	Total Dust	Personal Respirable Dust sampler VPDS 203	02	1.4-2.4	1.90	10	Gravimetric	4	----	<i>Bharat Kalsariya</i>	Mr. Bharat Kalsariya
2	DISP Plant (CCM Area)	Total Dust		02	1.4-2.0	1.70	10	Gravimetric	6	----		
3	COATING Plant-1 (shot blasting)	Total Dust		02	1.2-2.6	1.90	10	Gravimetric	3	----		
4	Zn Coating-2	Total Dust		02	1.4-2.2	1.80	10	Gravimetric	4	----		
5	SDP-2 Induction	Total Dust		02	1.4-2.6	2.00	10	Gravimetric	6	----		
6	JCO Plant (Nr. JCO Press)	Total Dust		02	1.3-2.5	1.90	10	Gravimetric	5	----		

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

Calibration Done on : 11/03/2019

For: Royal Environment Auditing & Consultancy Service

(Signature)
Authorized Sign

Form No. 37


(Prescribed under Rule 12-B)

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

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

3 Particulars of sampling

Date of Sampling : 04th September, 2019

Sr. No	Location Operation monitored	Identified Contaminate	Sampling Instrument used	Airborne Contamination			TWA Concentration (As given in Second Schedule)	Reference Method	Number of workers exposed at the location being monitored	Remark	Signature of person taking samples	Name (in block letters)
				Number of sample	Range	Average						
1	BF Plant-1 (Cast House)	CO	Personal Respirable Dust sampler VPDS 203	02	4.2-5.8	5.0	50 (ppm)	Gravimetric	4	---		Mr. Bharat Kalsariya
		Total Dust			1.6-2.6	2.10	10					

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

Calibration Done on. : 11/03/2019

For. Royal Environment Auditing & Consultancy Service




Authorized Sign