



L&T Special Steels and Heavy Forgings

**L&T Special Steels and
Heavy Forgings Private Limited**
Hazira Manufacturing Complex
Surat - 394 510, Gujarat, INDIA
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www.ltshf.com

Ref: LTSSHF/HZMC/ECCR/17-18/02

Date: 11.11.2017

To,
Regional Office (West),
Ministry of Environment & Forests,
Link Road No. 3, E - 5, Arera Colony,
Bhopal - 462 016, M.P.

Ref: Environment Clearance No. F. No. J-11011/193/2009-IA-II (I), Dtd. 20th
October 2009, Amendment Dtd. 23rd May 2012 & 23rd November 2015

Subject: Compliance report of Environment Clearance issued by MoEF for the period of
April 2017 - September 2017.

Dear Sir,


With reference to above referred subject, we would like to submit hereby our compliance
report for Environment Clearance, gist of the Clearances / Permissions are briefly mentioned
below.

- Environment Clearance (EC) from Ministry of Environment and Forest, Dtd. 20-10-2009. **(Annexure-10)**
- No Objection Certificate (Consent to Establish) from Gujarat Pollution Control Board (GPCB), No. GPCB/CE/SRT-2129/49334 Dtd. 20-04-2010. **(Annexure-11)**
- CTO (Consent to Operate) from GPCB, No. AWH-87212, Dtd. 20-07-2017. **(Annexure-12)**
- Amended Environment Clearance from MoEF, Dtd. 23-05-2012, Dtd. 09-04-2013 and 23-11-2015. **(Annexure-10)**
- Amended CTO from GPCB, Dtd. 03-03-2014. **(Annexure-12)**

Compliance report for above mentioned EC is enclosed here with. Hope the above
mentioned status report is in line with your requirement.

Thanking you,

For L&T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.


Authorized Signatory

Encl: a/p + CD (Soft Copy)

Copy to:

1. The Regional Office, Gujarat Pollution Control Board, Regional Office, 338, Belgium Square, Opp. Linear Bus Stand, Ring Road, Surat, Gujarat.
2. The Zonal Office, Central Pollution Control Board, Parivesh Bhavan, Opp. VMC Ward office No. 10, Subhanpura, Vadodara - 390 023. Phone No. 0265 2392603

L&T Special Steels and Heavy Forgings Pvt. Ltd., Hazira, Surat.
6 Monthly EC Compliance Report

Compliance Report for Environment Clearance (F. No. J-11011/193/2009-IA-II (I)), Dtd. 20 th October 2009 Period : Apr 2017 – Sept 2017																																							
No	Condition	Status																																					
1.	Products:	Total production during Apr 17 – Sep' 17																																					
	Forgings : 60,000 MTPA	1771.613 MT																																					
	Steel Ingots, Castings & Liquid Metal : 80,000 MTPA	2103.64 MT																																					
2.	Provision of fume extraction system with bag filters to control particulate emissions and low NO _x burners to control the NO _x emissions.	<ul style="list-style-type: none"> Complied. Fume extraction system with bag filters provided. Low NO_x burners are provided for Re Heating (RH) and Heat Treatment (HT) furnaces. Analysis report of stack emission attached (Annexure-1). Gist of the stack analysis results are mentioned below. (Average value during the period Apr 17 – Sep' 17): <table> <tr> <th>Parameter</th><th>Limit</th><th>Fume Extraction System</th><th>RH Furnace (250 & 300 MT)</th><th colspan="2">HT Furnace</th><th></th><th></th></tr> <tr> <td></td><td></td><td></td><td></td><th>(250 MT)</th><th>(400 MT)</th><td></td><td></td></tr> <tr> <td>Particulate Matter, mg/Nm³</td><td>40.0</td><td>11.4</td><td>12.6</td><td>10</td><td>10</td><td></td><td></td></tr> <tr> <td>NO_x, ppm</td><td>50.0</td><td>14.8</td><td>11.8</td><td>7.5</td><td>8.0</td><td></td><td></td></tr> </table> <p>*BDL (Below Detection Limit) = 10 mg/Nm³</p>						Parameter	Limit	Fume Extraction System	RH Furnace (250 & 300 MT)	HT Furnace								(250 MT)	(400 MT)			Particulate Matter, mg/Nm ³	40.0	11.4	12.6	10	10			NO _x , ppm	50.0	14.8	11.8	7.5	8.0		
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3.	Total raw water requirement will be 8,900 KLD. The waste water from the blow down will be treated in ETP and recycled/reused in the process. The RO Reject will be evaporated.	<ul style="list-style-type: none"> Total raw water consumed during Apr 17 – Sep' 17: 101093.7 KL (Daily average – 561.6 KLD) Complied. The waste water from plant (i.e. mainly cooling tower and boiler blow down) is being treated through ETP and recycled / reused in the process. RO Reject is being used for slag cooling. 																																					
	Specific Condition																																						
4.	Only natural gas will be used as fuel to reduce particulate emissions.	<ul style="list-style-type: none"> Complied. All re heating / heat treatment furnaces and boilers are operating on Natural gas as fuel. Analysis report of stack emission attached (Annexure-1). Quantity of Natural Gas consumed during Apr 17 – Sep' 17: 72,79,102 Nm³ Gist of the stack analysis results are mentioned below. (Average value during the period Apr 17 – Sep' 17): <table> <tr> <th>Parameter</th><th>Limit</th><th>Fume Extraction System</th><th>RH Furnace (250 & 300 MT)</th><th colspan="2">HT-Furnace</th><th>Limit</th><th>Boiler</th></tr> <tr> <td></td><td></td><td></td><td></td><th>(250 MT)</th><th>(400 MT)</th><td></td><td></td></tr> <tr> <td>Particulate Matter, mg/nm³</td><td>40</td><td>11.4</td><td>12.6</td><td>10</td><td>10</td><td>150</td><td>20</td></tr> </table>						Parameter	Limit	Fume Extraction System	RH Furnace (250 & 300 MT)	HT-Furnace		Limit	Boiler					(250 MT)	(400 MT)			Particulate Matter, mg/nm ³	40	11.4	12.6	10	10	150	20								
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5.	Efforts shall be made to reduce RSPM levels in the ambient air. Ambient air quality monitoring stations shall be set up in the downwind direction as well as where maximum ground level concentration of SPM are anticipated in consultation with the GSPCB. Data on ambient air, stack and fugitive emissions shall be submitted to the Ministry's Regional Office at Bhopal, GPCB and CPCB.	<ul style="list-style-type: none">Complied. Effective Environment Management System is installed for Air Pollution Control. We are monitoring Ambient Air Quality at 4 stations i.e. one in Downwind direction, one in upwind direction and two as reference points. Ambient Air Quality Monitoring reports are enclosed here with (Annexure-2).Results of 4 nos. of Ambient air quality monitoring station's data (Average value during the period Apr 17 – Sep' 17) are mentioned below: <table><tr><th>AAQM Station</th><th>PM₁₀, µg/m³</th><th>PM_{2.5}, µg/m³</th><th>SO₂, µg/m³</th><th>NO_x, µg/m³</th></tr><tr><td>Limit</td><td>100</td><td>60</td><td>80</td><td>80</td></tr><tr><td>I</td><td>74.91</td><td>39.78</td><td>16.88</td><td>34.15</td></tr><tr><td>II</td><td>73.20</td><td>34.45</td><td>18.16</td><td>33.16</td></tr><tr><td>III</td><td>83.57</td><td>41.91</td><td>17.65</td><td>41.85</td></tr><tr><td>IV</td><td>77.47</td><td>38.05</td><td>15.13</td><td>33.18</td></tr></table>	AAQM Station	PM ₁₀ , µg/m ³	PM _{2.5} , µg/m ³	SO ₂ , µg/m ³	NO _x , µg/m ³	Limit	100	60	80	80	I	74.91	39.78	16.88	34.15	II	73.20	34.45	18.16	33.16	III	83.57	41.91	17.65	41.85	IV	77.47	38.05	15.13	33.18
AAQM Station	PM ₁₀ , µg/m ³	PM _{2.5} , µg/m ³	SO ₂ , µg/m ³	NO _x , µg/m ³																												
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6.	On line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks and sufficient air pollution control devices shall be provided. The emissions of particulate matter from various process units shall conform standards prescribed by the concerned authorities from time to time.	Complied. Environment Monitoring Program through MoEF approved laboratory covers the monitoring of Stack and Ambient Air Quality on regular basis. Reports are attached herewith (Annexure-1,2) . Online monitoring system, for Ambient Air Quality Monitoring (AAQM) and Continuous Emission Monitoring System (CEMS) for stacks, are installed.																														
7.	Particulate emissions from the furnaces shall not exceed 10 mg/NM ³ . Fumes extraction system and bag filter followed by adequately designed process vents shall be provided to arc furnace, ladle furnace, heating furnace vacuum treatment plant etc. to achieve the particulate emission below 40 mg/Nm ³ . Emissions from the furnaces shall be controlled by installation of hood over the melting pot with proper ventilation system. The duct shall be connected to a vent along with suitable exhaust fans to vent out fumes of melting pot and shall be let out through the stack of adequate height. Low NO _x	<ul style="list-style-type: none">Emission standard for Fume Extraction System (FES) noted as 40 mg/Nm³. (Vide Our letter no. L&T/HZMC/ENV/EC/2009/02 Dtd. 07th Sept. 2009). Adequate Fume Extraction System is considered to entrap primary and secondary emissions and to meet with the Norms.Low NO_x burners are installed for NG fired heating furnaces i.e. Re Heating (RH) and Heat Treatment (HT) furnaces, with adequate stack height.Analysis reports for FES, RH & HT Furnace and Boiler are attached herewith. (Annexure-1).Average Particulate Matter (PM) level for Fume Extraction System (FES), Re Heating (RH) and Heat Treatment (HT) Furnace are mentioned below.																														

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	burners shall be provided for control of NO _x emissions.	Parameter	Limit	Fume Extraction System	RH Furnace (250 & 300 MT)	HT Furnace (250 MT)	(400 MT)
		Particulate Matter, mg/nm ³	40.0	11.4	12.6	10	10
		NO _x , ppm	50.0	14.8	11.8	7.5	8.0
		*BDL (Below Detection Limit) = 10 mg/Nm ³					
8.	The company shall monitor the raw and treated wastewater quality for trace metals and air quality at source and ambient for PAH, BETX etc including routine parameters and the reports shall be submitted to the Ministry's Regional Office at Bhopal regularly with six monthly compliance reports.	<ul style="list-style-type: none"> Complied. The raw, treated waste water & treated sewage reports are attached (Annexure-5, 6). Air quality at source (Work area monitoring & Stack monitoring) & ambient air quality monitoring reports are attached. (Annexure-1, 2 & 3). 					
9.	The company shall connect the pollution control equipment to DG set to ensure operation of these equipment during power failure. The company shall also provide interlocking system with the process equipment so that the plant automatically stops in case the pollution load exceeds the guaranteed limits.	Noted.					
10.	The industry shall ensure that the treated effluent and stack emissions in the unit are within the norms stipulated under the EPA rules or GPCB whichever is more stringent. In case of process disturbances/failure of pollution control equipments adopted in the unit, the respective unit shall be shut down and shall not be restarted until the control measures are rectified to achieve the desired efficiency.	<ul style="list-style-type: none"> Noted & Confirmed. Analysis report for treated effluent and stack emission attached. (Annexure-1, 5 & 6). 					
11.	In plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Dust suppression and dust extraction systems shall be provided to control fugitive emissions at	<ul style="list-style-type: none"> Noted & Confirmed. The belt conveyors for raw material charging are covered. Fume Extraction System with bag filter is provided to entrap the fugitive emission from the plant. Raw materials like ferro alloys stored in closed containers and in closed areas. 					

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	material handling points. Fugitive emissions shall be controlled by providing closed storages, water sprinkling system, covered belt conveyers, bag filters at transfer points etc. to arrest the suspended particles. Dust suppression system including wet sprinkling system shall be provided at loading and unloading areas to control dust emissions. Data on fugitive emissions shall be regularly monitored and records to be maintained.	<ul style="list-style-type: none">The Environment Monitoring Plan covers the monitoring of fugitive emission from vulnerable sources. Report for work zone monitoring is attached herewith (Annexure-3).												
12.	Secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines/Code of practice issued by CPCB shall be followed. The emission standards issued by Ministry in May, 2008 shall be followed.	<ul style="list-style-type: none">Noted & Confirmed. (Annexure-3).Average Fugitive emission, i.e. Dust level at various location within plant are mentioned below: <table><tr><th rowspan="2">Parameter</th><th rowspan="2">Limit</th><th colspan="2">SMS Area</th><th rowspan="2">Forging Area</th></tr><tr><th>Electrical Arc Furnace Platform / Casting Area</th><th>Lime Charging Area</th></tr><tr><td>Dust, $\mu\text{g}/\text{m}^3$</td><td>2000</td><td>626.2</td><td>749.2</td><td>557.7</td></tr></table>	Parameter	Limit	SMS Area		Forging Area	Electrical Arc Furnace Platform / Casting Area	Lime Charging Area	Dust, $\mu\text{g}/\text{m}^3$	2000	626.2	749.2	557.7
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13.	Vehicular pollution due to transportation of raw material and finished products shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.	Noted.												
14.	Total water requirement from existing Singanpore water supply pipeline from River Tapi shall not exceed 9,100 m ³ /day. All the waste water generated from the process shall be treated in the effluent treatment plant (ETP) followed by Reverse Osmosis (RO) plant and recycled and reused in the process and/or used for dust suppression, green belt development and for various activities at the project site. No effluent shall be discharged outside the premises. The RO reject shall be utilised for slag cooling to ensure zero discharge. Zero discharge shall be strictly adopted. Sewage wastewater shall be	<ul style="list-style-type: none">Noted. Total raw water requirement for L&T SSHF will be 8900 m³/day. (Ref. our letter no. L&T/HZMC/ENV/EC/2012/01 Dtd. 27th March 2012).Average water consumption, treated water and sewage generation are mentioned below. <table><tr><th>Particulars</th><th>Apr 17 – Sep 17</th></tr><tr><td>Raw water consumed</td><td>101093.7KL (Daily average - 561.6 KLD)</td></tr><tr><td>Effluent recycled (RO Permeate)</td><td>4798 KL (Daily avg - 26.6 KLD)</td></tr><tr><td>Treated sewage generated</td><td>10310 KL (Daily avg - 57.3 KLD)</td></tr></table> <ul style="list-style-type: none">Analysis report for treated effluent (RO permeate) and treated sewage attached herewith. (Annexure-5 & 6).	Particulars	Apr 17 – Sep 17	Raw water consumed	101093.7KL (Daily average - 561.6 KLD)	Effluent recycled (RO Permeate)	4798 KL (Daily avg - 26.6 KLD)	Treated sewage generated	10310 KL (Daily avg - 57.3 KLD)				
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	adequately treated in the sewage treatment plant (STP) and conform to the prescribed standards and used for green belt development.	
15.	Prior permission for the drawl of 9,100 m ³ /day water from River Tapi shall be obtained from the concerned department and a copy of the letter shall be submitted to the Regional Office at Bhopal within 3 months of issue of the environment clearance.	Complied.
16.	All the slag or any other toxic substance generated in the process due to use of raw materials like ferro alloys, ferro chrome, ferro manganese, ferro molybdenum, nickel, ferro silicon, ferro titanium and ferro vanadium etc. shall be used for land filling inside the plant or used as building material only after passing through Toxic Chemical Leachability Potential (TCLP) test. Toxic slag shall be disposed in secured landfill as per CPCB guidelines. Otherwise, hazardous substances shall be recovered from the slag and output waste shall be disposed in secured landfill or common hazardous waste treatment, storage and disposal facility (CHWTSDF) as per CPCB guidelines and authorization shall be obtained from the concerned Competent Authority and renewed time to time.	<ul style="list-style-type: none"> • Toxic Chemical Leach Potential Test (TCLP) test has been conducted (Annexure-7) for Slag and found Non-hazardous in nature as per Hazardous Waste Rule. Slag is being used for landfilling/as building material/other suitable application. • Permission of GPCB approved CHWTSDF has been obtained for the disposal of hazardous wastes. (Annexure-8).
17.	All the metal scrap, Iron oxide and dust shall be recycled/reused in electric arc furnace. All the other solid/hazardous waste generated including rejects from Reverse Osmosis (RO) plant shall be properly utilised or disposed off in environment friendly manner. The domestic waste including sewage sludge shall be treated biologically and used as manure for green belt. Used/spent oil shall be sold to authorized recyclers as per the	Complied.

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	Hazardous Waste (Management & Handling) Rules 1989 and subsequent amendments.																																					
18.	A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal.	<div>Noted & Confirmed</div> <table><tr><th>Action Plan</th><th>Target</th><th>Responsibility</th></tr><tr><td>Utilizing maximum Metal Scrap generated within plant as input raw material</td><td>On Going</td><td>Production Dept. / Stores</td></tr><tr><td>Achieving maximum yield of production for reduction of waste</td><td>On Going – 88 % yield of Steel Melting</td><td>Production Dept.</td></tr><tr><td>Reusing of organic waste like Canteen Waste, Paper Waste, Garden Waste, STP manure etc.</td><td>On Going (0.2 MT) Organic Manure Produced during FY 17-18 (Q3+Q4) from these waste)</td><td>Canteen, Housekeeping, Horticulture & EHS Dept.</td></tr></table>	Action Plan	Target	Responsibility	Utilizing maximum Metal Scrap generated within plant as input raw material	On Going	Production Dept. / Stores	Achieving maximum yield of production for reduction of waste	On Going – 88 % yield of Steel Melting	Production Dept.	Reusing of organic waste like Canteen Waste, Paper Waste, Garden Waste, STP manure etc.	On Going (0.2 MT) Organic Manure Produced during FY 17-18 (Q3+Q4) from these waste)	Canteen, Housekeeping, Horticulture & EHS Dept.																								
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19.	Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid / hazardous waste shall be submitted to the Ministry's Regional Office at Bhopal, GPCB and CPCB.	<div><ul style="list-style-type: none">Noted & Confirmed.Analysis report of Slag for TCLP study and ETP sludge attached herewith (Annexure-7).Disposal record from Apr 17 – Sep' 17 is mentioned below.</div> <table><tr><th>Particulars</th><th>Disposal methods</th><th>Disposal of Waste during Apr 17 – Sep' 17</th><th>Stock as on 31st Mar'17</th></tr><tr><td colspan="4">Solid Waste</td></tr><tr><td>Slag</td><td>Used for landfilling or other suitable application</td><td>1637 Ton</td><td>92 Ton</td></tr><tr><td colspan="4">Hazardous waste</td></tr><tr><td>ETP Sludge (34.3)</td><td>Disposal to BEIL for Secured landfilling at TSDF</td><td>9.83</td><td>0.280 Ton</td></tr><tr><td>Used / Spent Oil (5.1)</td><td>Given to Registered recycler</td><td>Nil</td><td>3.2 Ton</td></tr><tr><td>Maintenance waste containing Oil /Waste Oil (5.2)</td><td>Disposal to BEIL for Incineration</td><td>Nil</td><td>0.53 Ton</td></tr><tr><td>Discarded Containers (33.3)</td><td>Given to Registered recycler</td><td>0.39</td><td>0.42 Ton</td></tr><tr><td>Dried left over paint (33.3)</td><td>Disposal to BEIL for incineration</td><td>Nil</td><td>Nil</td></tr></table>	Particulars	Disposal methods	Disposal of Waste during Apr 17 – Sep' 17	Stock as on 31 st Mar'17	Solid Waste				Slag	Used for landfilling or other suitable application	1637 Ton	92 Ton	Hazardous waste				ETP Sludge (34.3)	Disposal to BEIL for Secured landfilling at TSDF	9.83	0.280 Ton	Used / Spent Oil (5.1)	Given to Registered recycler	Nil	3.2 Ton	Maintenance waste containing Oil /Waste Oil (5.2)	Disposal to BEIL for Incineration	Nil	0.53 Ton	Discarded Containers (33.3)	Given to Registered recycler	0.39	0.42 Ton	Dried left over paint (33.3)	Disposal to BEIL for incineration	Nil	Nil
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20.	Green belt shall be developed in 33 % in and around the plant premises to mitigate the effects of fugitive emissions all around the plant as per	<div><ul style="list-style-type: none">Complied.Plot area: 90 Acre, Green Belt & Green Space: 30 Acre, Total No. of trees planted : 7702Photograph attached for green belt area (Annexure-13).</div>																																				

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the CPCB guidelines in consultation with DFO.		Sr.	Name of Trees	Nos.
		1	Casurina	2224
		2	Peltophorum	976
		3	Pendula	1557
		4	Acaccia	987
		5	Champa	24
		6	Alstonia	663
		7	Bottle palm	39
		8	Cycus	46
		9	Shampaign palm	36
		10	Ficus	57
		11	Travellers palm	5
		12	Karanj	398
		13	Kadamba	458
		14	Bahunia	57
		15	Tabubia rosea	52
		16	Bottle brush	16
		17	Barringtonia	61
		18	Sultan champa	46
			Total	7702
21.	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the steel sector shall be implemented and progress report shall be submitted to MoEF/CPCB.	Our unit is integrated super heavy forge shops which do not include the pollution intensive activities as it is in case of integrated iron and steel plant. CREP covers the guidelines for integrated iron and steel plant, some of the clauses under CREP may not be applicable in our case. CREP compliance report is attached herewith. (Annexure-9).		
22.	Proper care shall be taken in structural design to protect against earthquake if the site falls under earthquake zone and implemented during construction phase.	<ul style="list-style-type: none"> Noted and complied. Proper care is taken in structural design to protect against earthquake. Design basis are: (1) The Basic wind speed $V_b = 44$ m/sec, (2), Seismic Zone factor (Z)=0.16, Seismic zone - III. 		
23.	The company shall provide housing for construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	<ul style="list-style-type: none"> Noted. Local workers will be employed for construction as well as operation phase & no housing for construction workers will be required. Other facilities like toilets, STP, drinking water, medical health centre etc. will be provided. 		
24.	The project authorities must strictly adhere to the stipulations made by the Gujarat Pollution Control Board (GPCB) and the State Government.	Noted & Confirmed. Compliance report of CTO is submitted to GPCB time to time along with Environment Audit Report. Copy of CTO Compliance is attached herewith. (Annexure-12A)		

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25.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	Noted.
26.	The gaseous emissions from various process units shall conform to the load/mass based standards notified by the Ministry on 19 th May, 1993 and standards prescribed from time to time. The Gujarat Pollution Control Board (GPCB) may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time, the emission levels shall go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency.	Noted and Complied.
27.	At least four ambient air quality monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of SPM, SO ₂ and NO _x are anticipated in consultation with the State Pollution Control Board. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Bhopal and GPCB/CPCB once in six months.	<ul style="list-style-type: none"> • Noted and Complied. • Four Nos. of Ambient Air Quality Monitoring Stations provided. Reports are attached herewith. (Annexure-2).
28.	Industrial waste water shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 th May 1993 and 31 st December 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.	Noted and Complied. Norms for treated effluent i.e. RO Permeate & treated sewage are specified in CCA by SPCB. Report for the same is attached herewith. (Annexure-5 & 6).
29.	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	Noted. Noise monitoring reports are attached herewith. (Annexure-4).

L&T Special Steels and Heavy Forgings Pvt. Ltd., Hazira, Surat.

6 Monthly EC Compliance Report

30.	The company shall undertake rainwater harvesting measures by collecting the rainwater through drains. The water collected shall be connected to raw water pipeline for reuse in the plant. The company shall provide proper drainage system for rainwater to prevent water logging within and in the vicinity of the plant.	<ul style="list-style-type: none">Noted and Complied. Rain Water harvesting is done by storing the rain water and utilising it for reuse purposes within plant.Design Basis: Total Area considered for catchment: 60,000 m2. Avg. rain fall : 900 mm / month Total volume : 48,000 m3 Approx. Collection volume : 1000 m3Total rain water utilization during Monsoon: 4200 m3																				
31.	Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.	Noted & Complied. Records are maintained for Pre medical and Periodic medical examination, i.e. Form 32 & 33.																				
32.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report and during the public hearing meeting. Further the company must undertake socio economic development activities in the surrounding village like community development programmes, educational programme, drinking water supply and health care etc.	Noted and Complied.																				
33.	Adequate funds shall be earmarked towards capital cost and recurring cost/annum for the environmental pollution control to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. An implementation schedule for complying with all the conditions stipulated herein shall be submitted to the Regional Office of this Ministry at Bhopal/CPCB/GPCB. The funds so provided shall not be diverted for any other purposes.	<ul style="list-style-type: none">Noted and Complied.Adequate funds are earmarked towards capital cost and recurring cost/annum for the environmental pollution control. <table><tr><th>Revenue Expenditure (approx.) for the FY 17-18</th><th>Rupees in Lacs</th></tr><tr><td>Environmental Monitoring through MoEF Approved Laboratory</td><td>6.0</td></tr><tr><td>Environment Audit through Schedule I Auditor</td><td>5.6</td></tr><tr><td>ISO 14001 & OHSAS 18001 Surveillance Audit</td><td>2.0</td></tr><tr><td>Hazardous Waste Management and Disposal</td><td>0.8</td></tr><tr><td>Operation and Maintenance cost of ETP (Based on Power Consumption and consumables)</td><td>7.0</td></tr><tr><td>Operation and Maintenance cost of STP (Based on Power Consumption and consumables)</td><td>6.8</td></tr><tr><td>Operation and Maintenance cost of Organic Waste Converter (Based on Power Consumption and consumables)</td><td>0.21</td></tr><tr><td>Operation and Maintenance cost of AAQM & CEMS (Based on Power Consumption and consumables)</td><td>4.3</td></tr><tr><td>Operation of APCM (Based on Power Consumption)</td><td>24.7</td></tr></table>	Revenue Expenditure (approx.) for the FY 17-18	Rupees in Lacs	Environmental Monitoring through MoEF Approved Laboratory	6.0	Environment Audit through Schedule I Auditor	5.6	ISO 14001 & OHSAS 18001 Surveillance Audit	2.0	Hazardous Waste Management and Disposal	0.8	Operation and Maintenance cost of ETP (Based on Power Consumption and consumables)	7.0	Operation and Maintenance cost of STP (Based on Power Consumption and consumables)	6.8	Operation and Maintenance cost of Organic Waste Converter (Based on Power Consumption and consumables)	0.21	Operation and Maintenance cost of AAQM & CEMS (Based on Power Consumption and consumables)	4.3	Operation of APCM (Based on Power Consumption)	24.7
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Operation and Maintenance cost of AAQM & CEMS (Based on Power Consumption and consumables)	4.3																					
Operation of APCM (Based on Power Consumption)	24.7																					
34.	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad / Municipal Corporation, Urban Local Body and the local NGO, if any from whom	Noted and Complied. EC Compliance report is kept on web site with copy of Certificate.																				

L&T Special Steels and Heavy Forgings Pvt. Ltd., Hazira, Surat.

6 Monthly EC Compliance Report

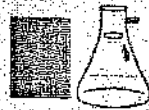
	suggestions/representations, if any, where received while processing the proposal. The clearance letter shall also be put on the web site of the company by proponent.	
35.	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MoEF at Bhopal, the respective Zonal Office of CPCB and the GPCB. The criteria pollutant levels namely SPM, RSPM, SO ₂ , NO _x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Noted and Complied. EC Compliance report is kept on web site with copy of Certificate.
36.	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environment conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF at Bhopal, the respective zonal office of CPCB and GPCB. The Regional office of this Ministry at Bhopal/CPCB/GPCB shall monitor the stipulated conditions.	<ul style="list-style-type: none"> • Noted and Complied. • Last EC Compliance report (For the period Oct'16 – Mar'17) submitted to <ul style="list-style-type: none"> ◦ MoEF, Regional Office, Bhopal on 11.10.2017 ◦ CPCB, Zonal Office, Baroda on 07.10.2017 ◦ GPCB, Regional Office, Surat on 25.10.2017
37.	The environmental statement for each financial year ending 31 st March in Form V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986 as amended subsequently shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Offices of the MoEF by email.	<ul style="list-style-type: none"> • Noted and Complied. • Form V for the year 2016-17 submitted on 17.06.2017
38.	Project authorities shall inform the Regional Offices as well as the Ministry, the date for financial closure and final approval of the project by the concerned authorities	Complied.

L&T Special Steels and Heavy Forgings Pvt. Ltd., Hazira, Surat.
6 Monthly EC Compliance Report

	and the date of commencing the land development work.	
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List of Annexures	
Annexure No.	Particulars
1	Stack Analysis Reports
2	Ambient Air Quality Monitoring Reports
3	Work Area Monitoring Reports
4	Noise Monitoring Reports
5	Raw Effluent and Treated Effluent Analysis Reports
6	Raw Sewage and Treated Sewage Reports
7	Toxic Chemical Leach Potential Study & ETP Sludge Analysis Reports
8	Common Hazardous Waste Management Facility Membership Certificate
9	CREP Compliance Report
10	Environment Clearance from MoEF, Dtd. 20-10-2009 and Amendment Dtd. 23-05-2012 , 09-04-2013 & 23-11-2015
11	Consent to Establish (CTE) from GPCB No. GPCB/CE/SRT-2129/49334, Dtd. 20-04-2010 and Amendment Dtd. 03.03.14
12	CTO (Consent to Operate) No. AWH-49308 from GPCB, Dtd. 05-09-2012 and Amendment Dtd. 03.03.14
12A	CTO Compliance Report
13	Photographs of Green Belt Area
14	Certificates and Recognitions

Annexure 1:
Stack Analysis Reports

**POLLUCON LABORATORIES PVT. LTD.**

TEST CERTIFICATE FOR STACK GAS MONITORING

Customer's Name and Address :

QR/5.10/328

Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA, PIN CODE - 394510

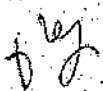
Test Report No. : **PL/LT 0065**
Issue Date : **25/05/2017**
Customer's Ref. : **W.O. No. FLS001001**
DTD 21.07.2016

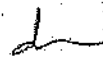
STACK DETAILS & RESULT

Location of Sampling	: FES Stack	Sampling Procedure	: As Per Table
Date of Sampling	: 12/05/2017	Protocol (purpose)	: Stack Gas Monitoring
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Time of Sampling in Hrs	: 11:30
Sample Receipt Date	: 13/05/2017	Lab ID	: LT/1705/03 [A - C]
Date of Starting of Test	: 13/05/2017	Date of Completion	: 17/05/2017
Fuel	: Natural Gas	Stack Temperature	: 145 °C
Stack Height	: 35 meter	Velocity	: 7.07 m/sec
Instrument Used & Calibration Due Date	: Ecotech instrument stack sampler ESS 100, SI.No.13-1-71 & Date: 28.04.2017		

S.R. NO.	TEST PARAMETER	UNIT	RESULTS	GPCB NORM**	TEST / SAMPLING METHOD
1	Particulate Matter	mg/Nm ³	7.52	150	IS:11255 (Part-I):1985
2	Sulfur dioxide (as SO ₂)	ppm	1.86	100	IS:11255 (Part-II):1985
3	Oxides of Nitrogen (as NO _x)	ppm	12.52	50	IS:11255 (Part-VII):2005

BDL*: Below Detection Limit, Minimum Detection Limit, Particulate Matter: 10 mg/Nm³**Details provided by customer. Results on 11 % O₂ Correction when Oxygen is greater than 11 % and 12 % CO₂ Correction when CO₂ is less than 12 %


H.T. Shah
Lab Manager


Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

● FSSAI Approved Lab ● Recognised by MoEF, New Delhi Under Sec. 12 of Environmental (Protection) Act-1986 ● GPCB approved schedule II auditor ● ISO 14001 : 2004 ● OHSAS 18001 : 2007 ● ISO 9001 : 2008

Head Office : 544, Belgium Tower, Ring Road, Opp. Linear Bus Stand, Surat-395003, (Guj.) Tele : (0261) 2455751, 2601224, 2601106
Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-3905007.
Tele : (0261) 2635760, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**POLLUCON** LABORATORIES PVT. LTD.

TEST CERTIFICATE FOR STACK GAS MONITORING

Customer's Name and Address :

QR/5.10/32B

Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510.

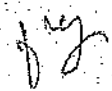
Test Report No. : **PL/LT 0067**Issue Date : **25/05/2017**Customer's Ref. : **W.D. No. FL5001001
DTD 21.07.2016**


STACK DETAILS & RESULT

Location of Sampling	: HT Furnace 250	Sampling Procedure	: As Per Table
Date of Sampling	: 12/05/2017	Protocol (purpose)	: Stack Gas Monitoring
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Time of Sampling in Hrs	: 13:00
Sample Receipt Date	: 13/05/2017	Lab ID	: LT/1705/05 [A - C]
Date of Starting of Test	: 13/05/2017	Stack Temperature	: 225 °C
Fuel	: Natural Gas	Velocity	: 8.28 m/sec
Date of Completion	: 17/05/2017	Stack Height	: 35 meter
Instrument Used & Calibration Due Date	Ecotech instrument stack sampler ESS 100, SI.No.13-1-71 & Date: 28.04.2017		

SR. NO.	TEST PARAMETER	UNIT	RESULTS	GPCB NORMS	TEST / SAMPLING METHOD
1	Particulate Matter	mg/Nm ³	6.54	150	IS:11255 (Part-I):1985
2	Sulfur dioxide (as SO ₂)	ppm	1.12	100	IS:11255 (Part-II):1985
3	Oxides of Nitrogen (as NO _x)	ppm	15.31	50	IS:11255 (Part-VII):2005

BDL: Below Detection Limit, Minimum Detection Limit, Particulate Matter: 10 mg/Nm³*Details provided by customer. Results on 11 % O₂ Correction when Oxygen is greater than 11 %


H.T. Shah
Lab Manager


Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

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Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-390507
Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com Website : www.polluconlab.com

**POLLUCON LABORATORIES PVT. LTD.**

TEST CERTIFICATE FOR STACK GAS MONITORING

Customer's Name and Address :

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Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510.

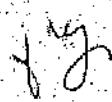
Test Report No. : **PL/LT 0066**Issue Date : **25/05/2017**Customer's Ref.: **W.O. No. FLS001001
DTD 21.07.2016**


STACK DETAILS & RESULT

Location of Sampling	: RH Furnace Common stack	Sampling Procedure	: As Per Table
Date of Sampling	: 12/05/2017	Protocol (purpose)	: Stack Gas Monitoring
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Time of Sampling in Hrs	: 12:15
Sample Receipt Date	: 13/05/2017	Lab ID	: LT/1705/04 [A - G]
Date of Starting of Test	: 13/05/2017	Date of Completion	: 17/05/2017
Fuel	: Natural Gas	Stack Temperature	: 280 °C
Stack Height	: 35 meter	Velocity	: 8.67 m/sec
Instrument Used & Calibration Due Date	: Ecotech instrument stack sampler ESS 100, SI.No.13-1-71 & Date: 28.04.2017		

Sr. No.	TEST PARAMETER	UNIT	RESULTS	GPCB NORMS*	TEST / SAMPLING METHOD
1	Particulate Matter	mg/Nm ³	22.35	150	IS:11255 (Part-I):1985
2	Sulfur dioxide (as SO ₂)	ppm	1.40	100	IS:11255 (Part-II):1985
3	Oxides of Nitrogen (as NO _x)	ppm	18.45	50	IS:11255 (Part-VII):2005

BDL*: Below Detection Limit; Minimum Detection Limit, Particulate Matter: 10 mg/Nm³, Sulfur Dioxide (as SO₂): 1.52 ppm
*Details provided by customer: Results on 11 % O₂ Correction when Oxygen is greater than 11 %


H.T. Shah
Lab Manager


Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

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Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com Website : www.polluconlab.com

**TEST CERTIFICATE FOR STACK GAS MONITORING**

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Page: 1 of 1

Customer's Name and Address :

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : **PL/LT 0077**Issue Date : **06/07/2017**Customer's Ref. : **W.O. No. FLS001001
DTD 21.07.2016****STACK DETAILS & RESULT**

Location of Sampling	: Boiler Stack	Sampling Procedure	: As Per Table
Date of Sampling	: 23/06/2017	Protocol (purpose)	: Stack Gas Monitoring
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Time of Sampling in Hrs:	11:45
Sample Receipt Date	: 24/06/2017	Lab ID	: LT/1706/03 [A - C]
Date of Starting of Test	: 24/06/2017	Date of Completion	: 29/06/2017
Fuel#	: Natural Gas	Stack Temperature	: 85 °C
Stack Height#	: 35 meter	Velocity	: 7.712 m/sec
Instrument Used & Calibration Due Date	: Ecotech instrument stack sampler ESS 100, SI.No.13-1-71 & Date: 28.04.2018		

SR. NO.	TEST PARAMETER	UNIT	RESULTS	GPCB NORM**	TEST / SAMPLING METHOD
1	Particulate Matter	mg/Nm ³	15.77	150	IS:11255 (Part-I):1985
2	Sulfur dioxide (as SO ₂)	ppm	2.30	100	IS:11255 (Part-II):1985
3	Oxides of Nitrogen (as NO _x)	ppm	15.04	50	IS:11255 (Part-VII):2005

BDL*: Below Detection Limit, Minimum Detection Limit, Particulate Matter: 10 mg/Nm³**Details provided by customer. Results on 11 % O₂ Correction when Oxygen is greater than 11 % and 12 % CO₂ Correction when CO₂ is less than 12 %

H.T. Shah
Lab Manager

Dr. Arun Bajpai
Lab Manager (Q)

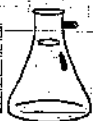
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Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**TEST CERTIFICATE FOR STACK GAS MONITORING**

Customer's Name and Address :

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Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510.

Test Report No. : **PL/LT 0078**Issue Date : **06/07/2017**Customer's Ref. : **W.O. No. FLS001001
DTD 21.07.2016****STACK DETAILS & RESULT**

Location of Sampling	: RH Furnace Common stack	Sampling Procedure	: As Per Table
Date of Sampling	: 23/06/2017	Protocol (purpose)	: Stack Gas Monitoring
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Time of Sampling in Hrs	: 11:00
Sample Receipt Date	: 24/06/2017	Lab ID	: LT/1706/04 [A - C]
Date of Starting of Test	: 24/06/2017	Date of Completion	: 29/06/2017
Fuel	: Natural Gas	Stack Temperature	: 270 °C
Stack Height	: 35 meter	Velocity	: 7.87 m/sec
Instrument Used & Calibration Due Date	: Ecotech instrument stack sampler ESS 100, SI.No.13-1-71 & Date: 28.04.2017		

SR. NO.	TEST PARAMETER	UNIT	RESULTS	GPCB NORMS#	TEST / SAMPLING METHOD
1	Particulate Matter	mg/Nm ³	8.22	150	IS:11255 (Part-I):1985
2	Sulfur dioxide (as SO ₂)	ppm	3.17	100	IS:11255 (Part-II):1985
3	Oxides of Nitrogen (as NO _x)	ppm	8.68	50	IS:11255 (Part-VII):2005

BDL*: Below Detection Limit, Minimum Detection Limit, Particulate Matter: 10 mg/Nm³, Sulfur Dioxide (as SO₂): 1.52 ppm
 *Details provided by customer. Results on 11 % O₂ Correction when Oxygen is greater than 11 %


H.T. Shah
Lab Manager

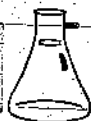

Dr. Arun Bajpai
Lab Manager (Q)

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Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-390500
 Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**TEST CERTIFICATE FOR STACK GAS MONITORING**

Customer's Name and Address :

QR/5.10/32B

Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510.

Test Report No. : **PL/LT 0079**Issue Date : **06/07/2017**Customer's Ref. : **W.O. No. FLS001001
DTD. 21.07.2016****STACK DETAILS & RESULT**

Location of Sampling	: HT Furnace 250	Sampling Procedure	: As Per Table
Date of Sampling	: 23/06/2017	Protocol (purpose)	: Stack Gas Monitoring
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Time of Sampling in Hrs	: 11:00
Sample Receipt Date	: 24/06/2017	Lab ID	: LT/1706/05 [A - C]
Date of Starting of Test	: 24/06/2017	Stack Temperature	: 99 °C
Fuel	: Natural Gas	Velocity	: 8.08 m/sec
Date of Completion	: 29/06/2017	Stack Height	: 35 meter
Instrument Used & Calibration Due Date	: Ecotech instrument stack sampler ESS 100, SI.No.13-1-71 & Date: 28.04.2017		

SR. NO.	TEST PARAMETER	UNIT	RESULTS	GPCB NORMS	TEST / SAMPLING METHOD
1	Particulate Matter	mg/Nm ³	6.36	150	IS:11255 (Part-I):1985
2	Sulfur dioxide (as SO ₂)	ppm	1.64	100	IS:11255 (Part-II):1985
3	Oxides of Nitrogen (as NO _x)	ppm	6.24	50	IS:11255 (Part-VII):2005

BDL*: Below Detection Limit, Minimum Detection Limit, Particulate Matter: 10 mg/Nm³*Details provided by customer. Results on 11 % O₂ Correction when Oxygen is greater than 11 %

H.T. Shah
Lab Manager

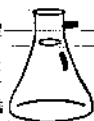
Dr. Arun Bajpai
Lab Manager (Q)

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● FSSAI Approved Lab ● Recognised by MoEF, New Delhi Under Sec. 12 of Environmental (Protection) Act-1986 ● GPCB approved schedule II auditor ● ISO 14001 : 2004 ● OHSAS 18001 : 2007 ● ISO 9001 : 2008

Head Office : 544, Belgium Tower, Ring Road, Opp. Linear Bus Stand, Surat-395003. (Guj.) Tele : (0261) 2455751, 2601224, 2601106

Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-390500
Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**TEST CERTIFICATE FOR STACK GAS MONITORING**

QR/5.10/328

Page: 1 of 1

Customer's Name and Address :

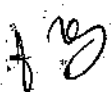
M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : **PL/LT 0101**Issue Date : **22/08/2017**Customer's Ref. : **W.O : FL5001153**
DTD:20.06.2017**STACK DETAILS & RESULT**

Location of Sampling	: Boiler Stack	Sampling Procedure	: As Per Table
Date of Sampling	: 11/08/2017	Protocol (purpose)	: Stack Gas Monitoring
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Time of Sampling in Hrs:	11:45
Sample Receipt Date	: 12/08/2017	Lab ID	: LT/1708/05A
Date of Starting of Test	: 12/08/2017	Date of Completion	: 17/08/2017
Fuel#	: Natural Gas	Stack Temperature	: 90 °C
Stack Height#	: 35 meter	Velocity	: 7.93 m/sec
Instrument Used & Calibration Due Date	: Ecotech instrument stack sampler ESS 100, SI.No.13-1-71 & Date: 28.04.2018		

SR. NO.	TEST PARAMETER	UNIT	RESULTS	GPCB NORM**	TEST / SAMPLING METHOD
1	Particulate Matter	mg/Nm ³	19.65	150	IS:11255 (Part-I):1985
2	Sulfur Dioxide as SO ₂	ppm	3.26	100	IS:11255 (Part-II):1985
3	Oxides of Nitrogen as NO _x	ppm	16.58	50	IS:11255 (Part-VII):2005

**Details provided by customer. Results on 11 % O₂ Correction when Oxygen is greater than 11 % and 12 % CO₂ Correction when CO₂ is less than 12 %
 CC & A: AWH-87212 Issued Date: 20/07/2017 Valid up to: 22/05/2022

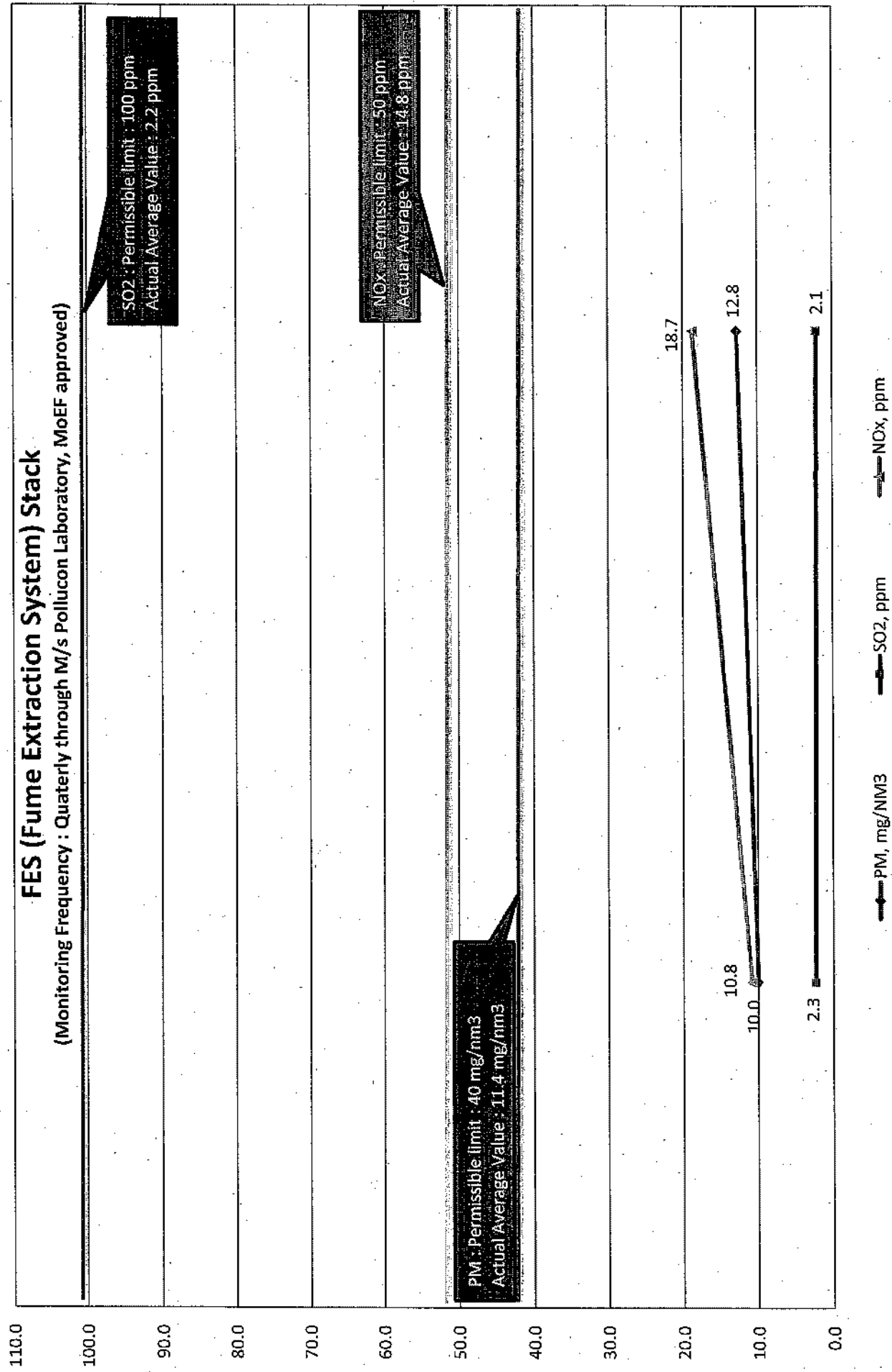

H.T. Shah
 Lab Manager


Dr. Arun Bajpai
 Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

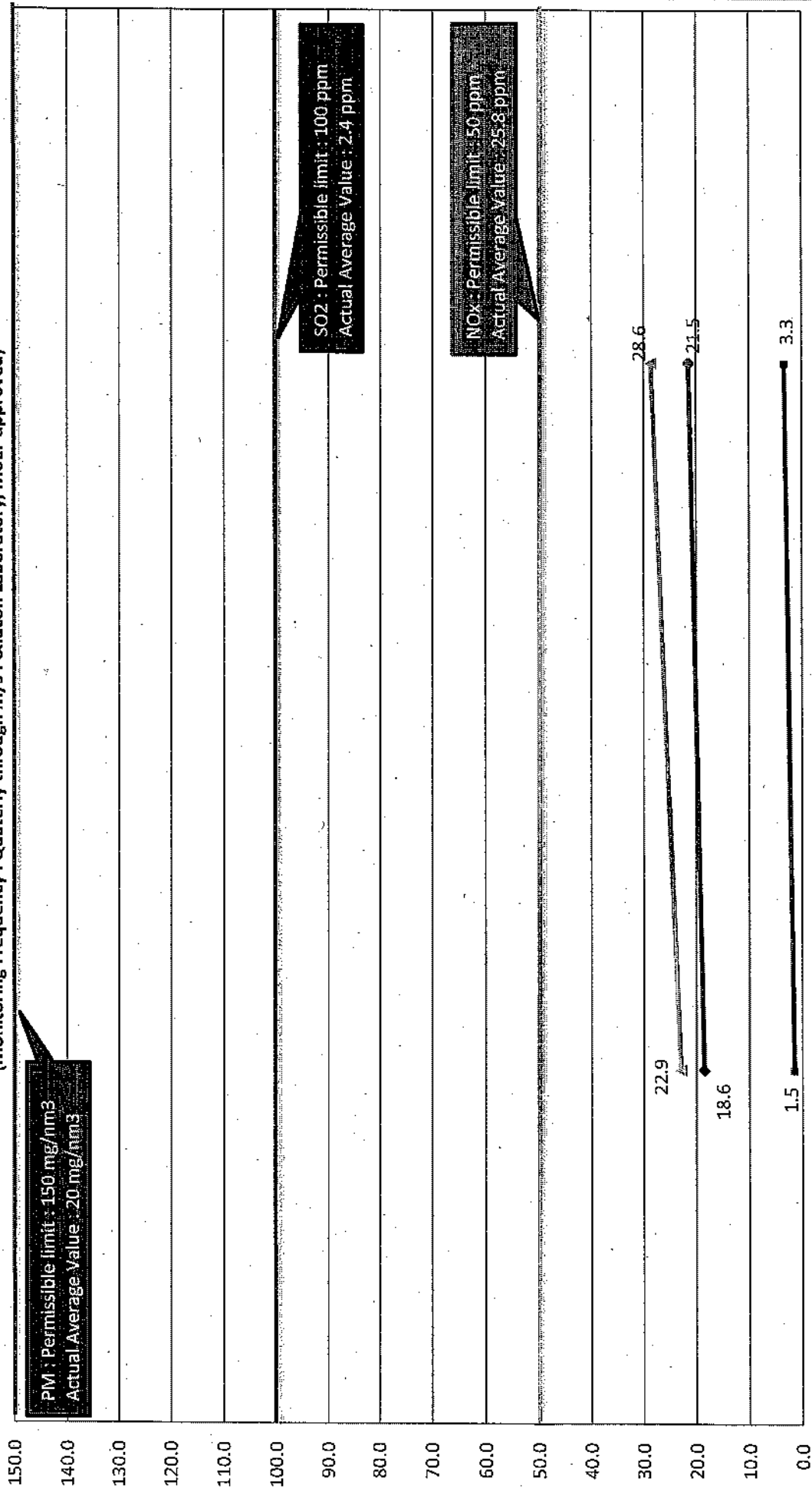
FES (Fume Extraction System) Stack

(Monitoring Frequency : Quaterly through M/s Pollucon Laboratory, MoEF approved)



Boiler Stack

(Monitoring Frequency : Quarterly through M/s Pollucon Laboratory, MoEF approved)

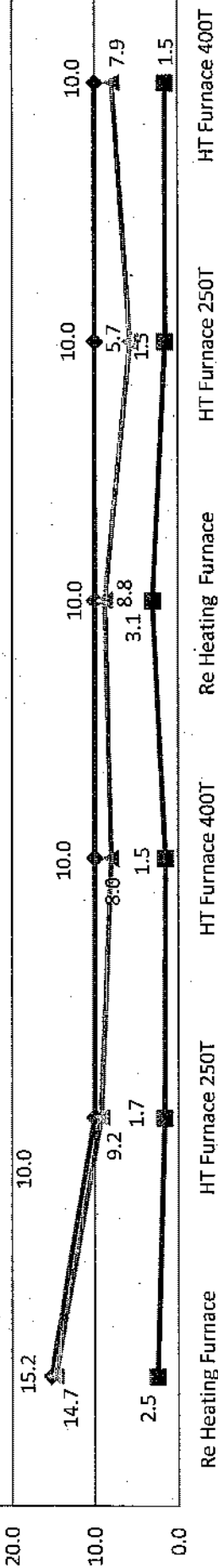


Heating Furnaces, Re Heating (RH) & Heat Treatment (HT), Stack (Monitoring Frequency : Quaterly through M/s Pollucon Laboratory, MoEF approved)

SO₂ : Permissible limit : 100 ppm
Actual Average Value : 2.0 ppm

NO_x : Permissible limit : 50 ppm
Actual Average Value : 9.1 ppm

PM : Permissible limit : 40 ppm
Actual Average Value : 10.9 ppm

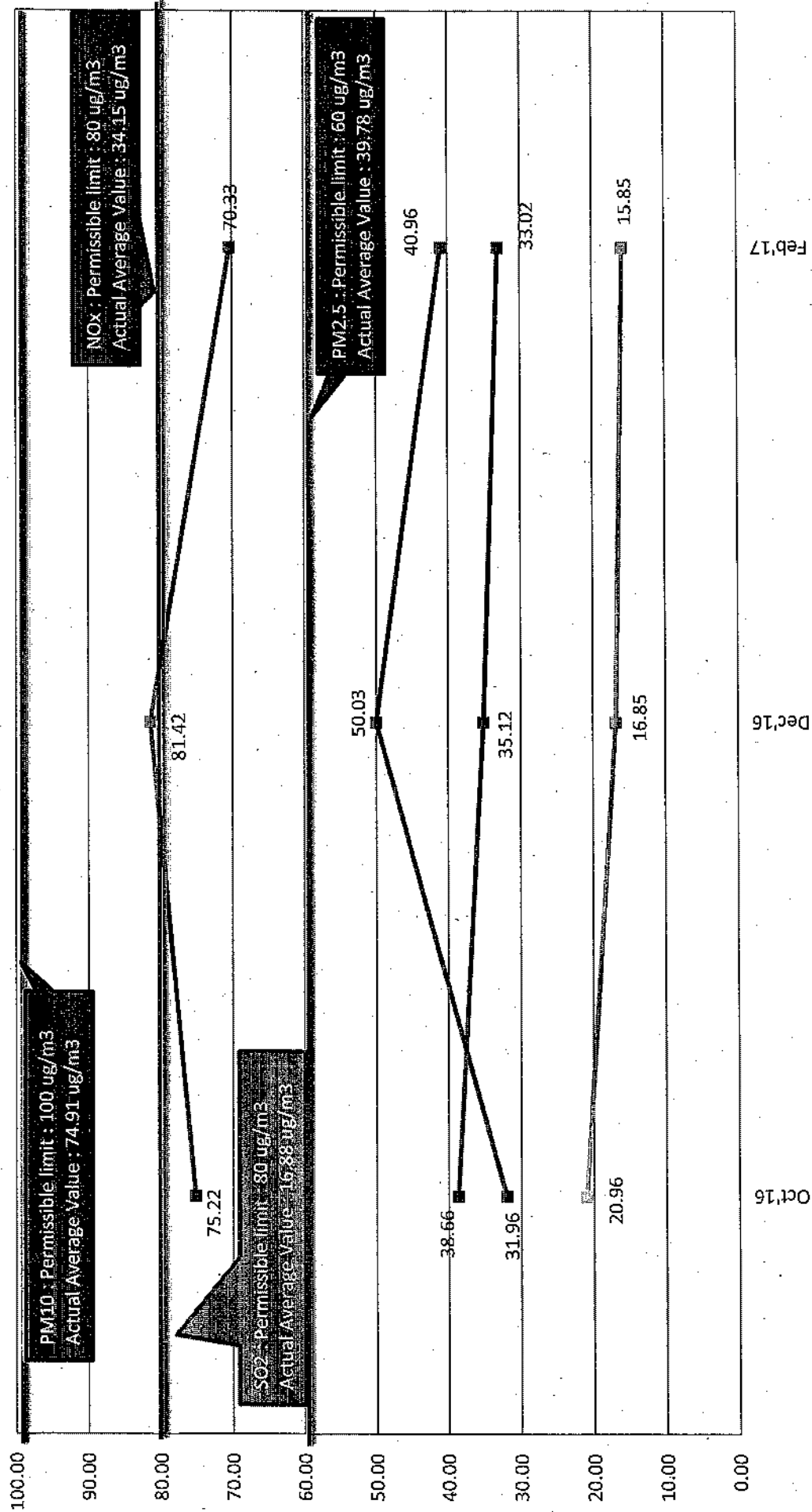


◆ PM, mg/NM3 ■ SO₂, ppm ▲ NO_x, ppm

Annexure 2:
Ambient Air Quality Monitoring Reports

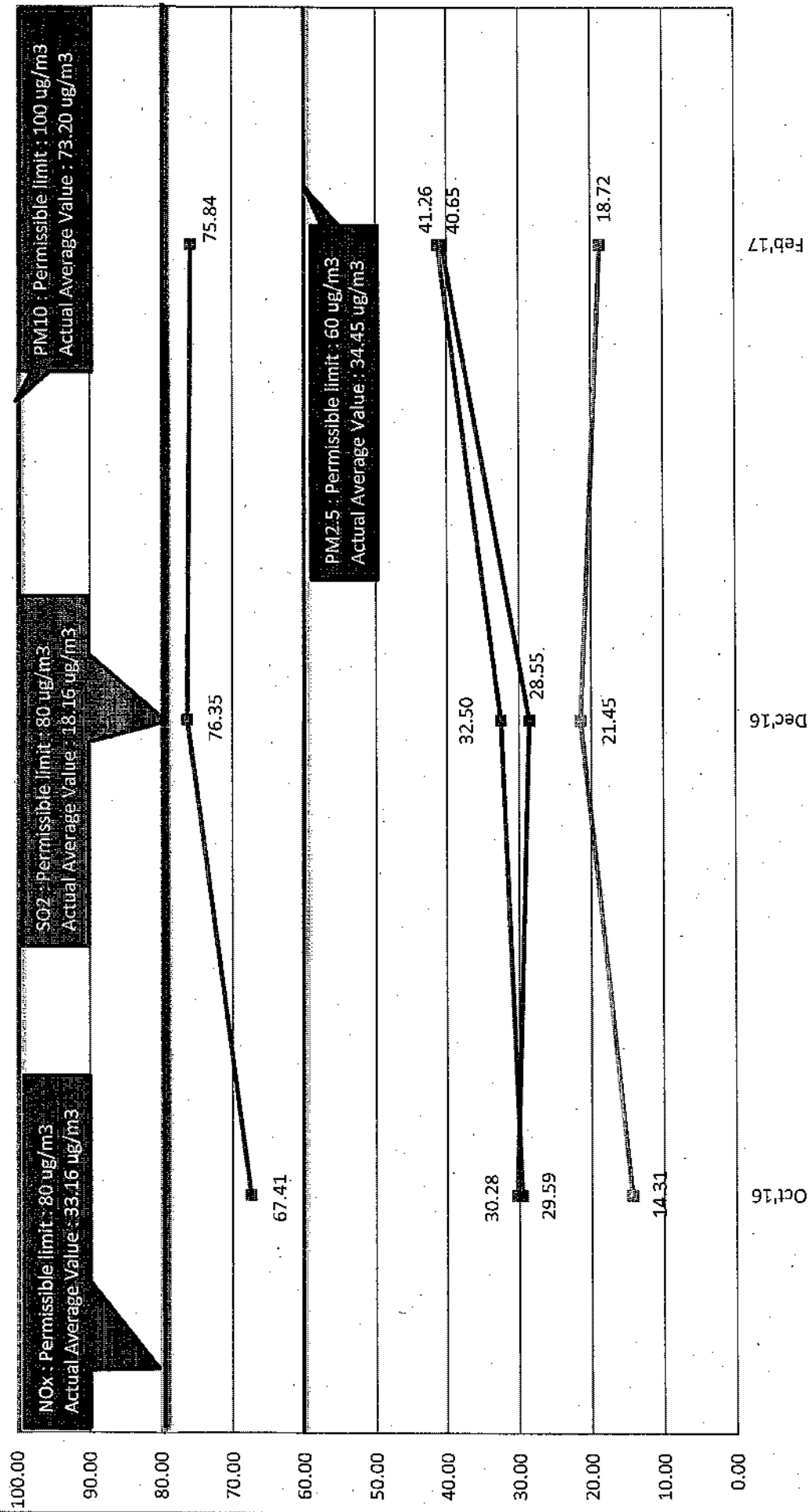
Ambient Air Quality Monitoring - AAQM I

(Monitoring Frequency : Monthly 2 stations through MoEF approved Laboratory)



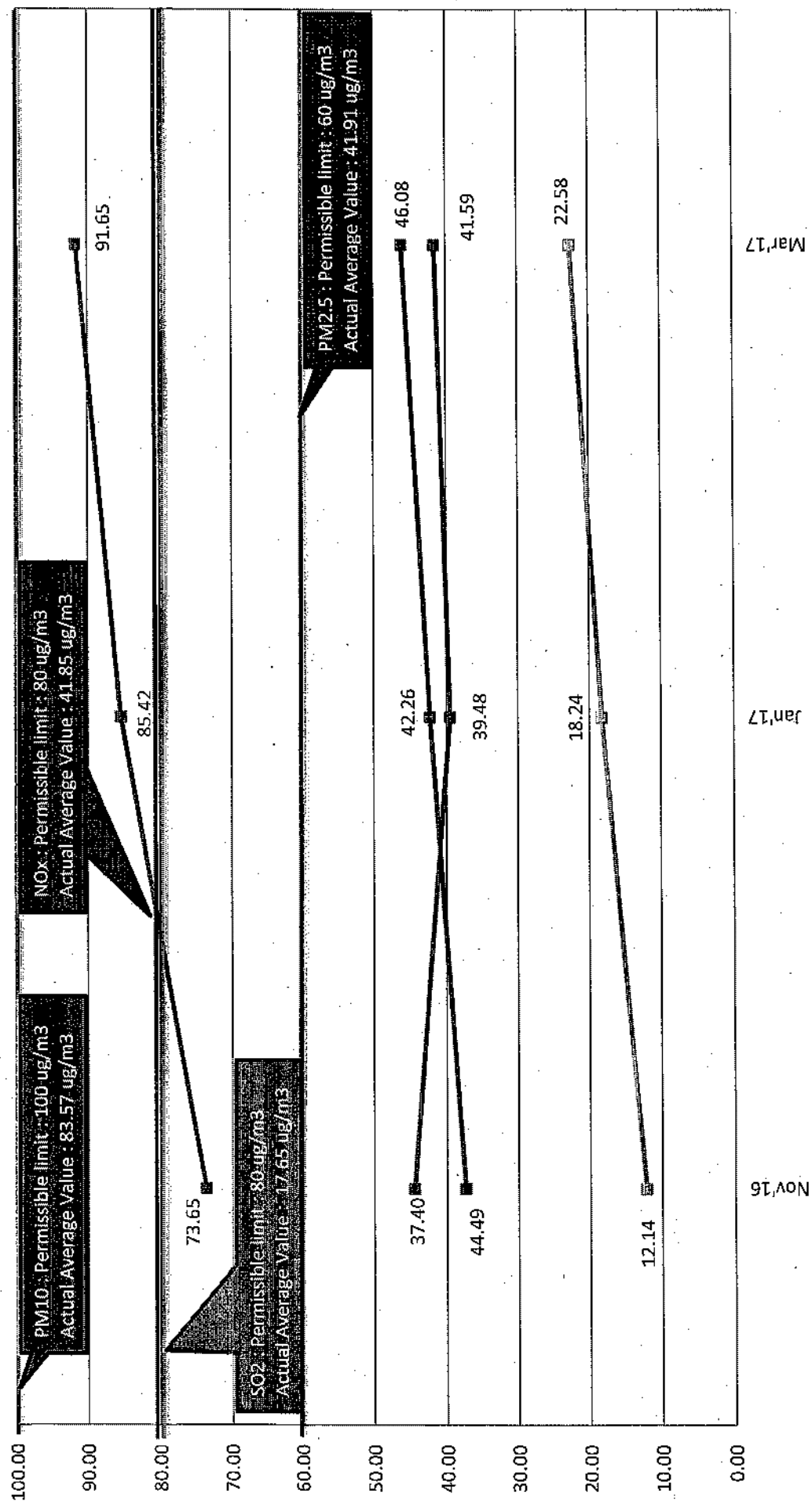
Ambient Air Quality Monitoring - AAQM II

(Monitoring Frequency : Monthly 2 stations through MoEF approved Laboratory)



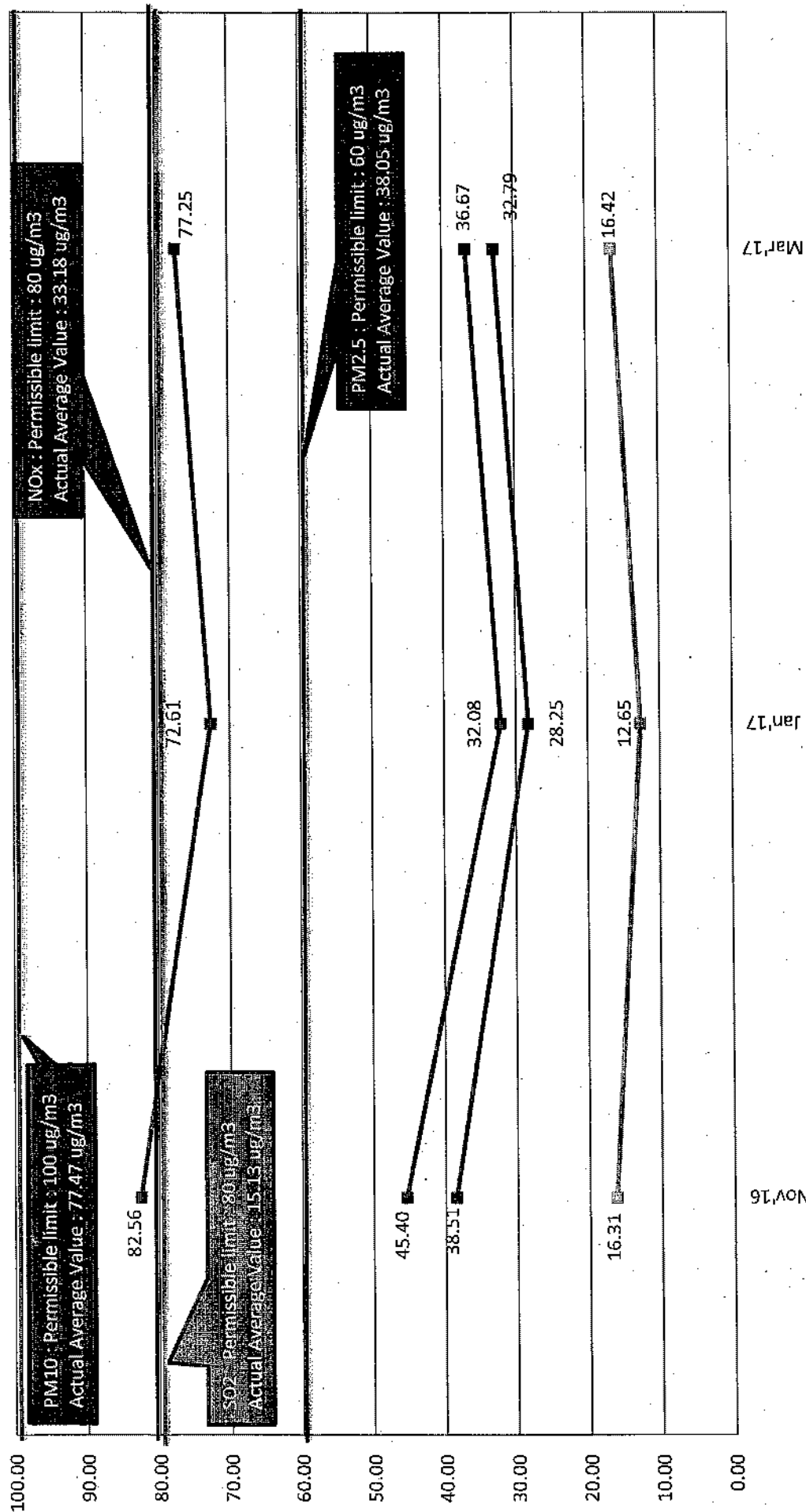
Ambient Air Quality Monitoring - AAQM III

(Monitoring Frequency : Monthly 2 stations through MoEF approved Laboratory)



Ambient Air Quality Monitoring - AAQM IV

(Monitoring Frequency : Monthly 2 stations through MoEF approved Laboratory)



PM10, $\mu\text{g}/\text{m}^3$ PM 2.5, $\mu\text{g}/\text{m}^3$ SO2, $\mu\text{g}/\text{m}^3$ NOx, $\mu\text{g}/\text{m}^3$



TEST CERTIFICATE FOR AMBIENT AIR QUALITY MONITORING

Customer's Name and Address :

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M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : PL/LT 0043

Issue Date : 01/05/2017

Customer's Ref. : W.D. No. FL5001001
DTD. 21.07.2016

Sampling Location :	AAQM# 1 STP Plant	Wind Direction :	SW
Date of Sampling :	21/04/2017	Sampling Procedure :	As per table
Sampling By :	Pollucon Laboratories Pvt. Ltd.	Protocol (purpose) :	AAQM
Sampling Time in Hr. :	22:30	Lab ID :	LT/1704/Q2 [A - D]
Sample Receipt Date :	22/04/2017	Sampling Duration :	24 Hrs.
Date of Starting of Test :	22/04/2017	Date of Completion of Test :	27/04/2017
Instrument Used & Calibration Due Date :	Respirable Find Dust Sampler & Attached Gases Accessories: HVS ENVIROTECH APM 415 Sr. No.: 752 DTA 99, Date: 01/05/2017		

RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	RESULTS	LIMIT#	METHOD OF MEASUREMENT
1.	Respirable Particulate Matter(PM ₁₀)	µg/m ³	69.25	100	IS:5182(Part 23)
2.	Particulate Matter (PM _{2.5})	µg/m ³	28.34	60	Gravimetric
3.	Sulphur Dioxide (SO ₂)	µg/m ³	14.33	80	IS:5182(Part 2):2001
4.	Oxides of Nitrogen	µg/m ³	32.55	80	IS:5182(Part 6):1975 (Reaffirmed 1998)

Units: Industrial, Residential, Rural and other Area Notification Dated 18th Nov. 2009 as per national Ambient Air Quality Standards, CPCB New Delhi

• FSSAI Approved • Recognised by MoEF, New Delhi Under
Lab Manager

• GPCB approved
schedule II auditor

• ISO 14001: 2004

• ISO 9001: 2008
Lab Manager (Q)

Head Office : 544, Belgum Jockey Road, Opp. Linear Bus Stand, Surat-395003 (Guj.) Tele : (0261) 2635751, 2601224, 2601106
Branch Office : Plot No. 5/B, Pollucon House, Opp. Bala Industrial Soc., Old Shantinath Sak Mill Lane, Navivan Circle, Udhana Magdalla Road, Surat-390507.
Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com



POLLUCON LABORATORIES PVT. LTD.

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POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : PL/LT 0844
Issue Date : 01/05/2017
Customer's Ref. : W.O. No. FL5091001
BTD-21.07.2016

Sampling Location : AAQM# 2 Near Porta Cabin
Date of Sampling : 21/04/2017
Sampling By : Pollucon Laboratories Pvt. Ltd.
Sampling Time In Hr. : 23:00
Sample Receipt Date : 22/04/2017
Date of Starting of Test : 22/04/2017
Instrument Used & Calibration Due Date : Respirable Fine Dust Sampler & Attached Gases Accessories: RDS ENVIROTECH APM 415 Sr. No.: 607 DTA99, Date: 01/05/2017
Wind Direction : SW
Sampling Procedure : As per table
Protocol (purpose) : AAQM
Lab ID : LT/1704/01 [A - D]
Sampling Duration : 24 Hrs.
Date of Completion of Test : 27/04/2017

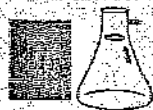
RESULT TABLE

SR. NO.	TEST PARAMETERS	UNIT	RESULTS	LIMIT#	METHOD OF MEASUREMENT
1	Respirable Particulate Matter (PM ₁₀)	µg/m ³	72.66	100	IS:5182(Part 23)
2	Particulate Matter (PM _{2.5})	µg/m ³	35.64	60	Gravimetric
3	Sulphur Dioxide (SO ₂)	µg/m ³	19.58	80	IS:5182(Part 2):2001
4	Oxides of Nitrogen	µg/m ³	38.39	80	IS:5182(Part 5):1975 (Reaffirmed 1996)

Limit#: Industrial, Residential, Rural and other Area Notification Dated 16th Nov.2009 as per national Ambient Air Quality Standards, CPCB New Delhi.

H.T. Shah
Lab Manager
FSSAI Approved
Recognised by MoEF, New Delhi Under
Section 2 of Environmental (Protection) Act-1986
GPCB approved
schedule II auditor
ISO 13001:2004
OHSAS 18001:2007
ISO 9001:2008

Head Office : 544, Belgium Road, Ring Road, Hazira, Surat-394005, Gujarat, India. Tel: 0261-2601224, 2601106
Branch Office : Plot No. 5/B, Pollucon House, Opp. Balaji Industrial Soc., Old Shantivanth Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-3905007.
Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com Website : www.polluconlab.com



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HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : **PL/LT 0054**
Issue Date : **18/05/2017**
Customer's Ref. : **W.D. No. FLS001001**
DTD 21.07.2016

Sampling Location : **AAQM#3 STP Sump 2** Wind Direction : **Calm**
Date of Sampling : **12/05/2017** Sampling Procedure : **As per table**
Sampling By : **Pollucon Laboratories Pvt. Ltd.** Protocol (purpose) : **AAQM**
Sampling Time In Hr. : **22:30** Lab ID : **LT/1705/01 [A - D]**
Sample Receipt Date : **13/05/2017** Sampling Duration : **24 Hrs.**
Date of Starting of Test : **13/05/2017** Date of Completion of Test : **18/05/2017**
Yash Combo PM10 & PM2.5 Diff Rotameter Yash Model Nos-PNS-Combo
Instrument Used & Calibration Due Date : **PM10 SAMPLER DGM G1.6 14697610, 2014**
PM2.5 SAMPLER DGM G1.6 14697612, 2014
Cal. Date : 28/05/2016 Due Date : 27/05/2018

RESULTS

SR. NO.	TEST PARAMETERS	UNIT	RESULTS	LIMIT#	METHOD OF MEASUREMENT
1	Respirable Particulate Matter (PM ₁₀)	µg/m ³	78.36	100	IS:5182(Part 23)
2	Particulate Matter (PM _{2.5})	µg/m ³	34.56	60	Gravimetric
3	Sulphur Dioxide (SO ₂)	µg/m ³	15.62	80	IS:5182(Part 2):2001
4	Oxides of Nitrogen	µg/m ³	37.31	80	IS:5182(Part 6):1975 (Reaffirmed 1998)

Units: Industrial, Residential, Rural and other Area Notification Dated 18th Nov.2009 as per national Ambient Air Quality Standards, CPCB, New Delhi.

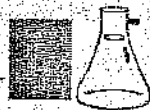
• FSSAI Approved Lab Recognised by MoEF, New Delhi Under
• Lab Manager of Environmental (Protection) Act-1986

• CPCB approved
• schedule II auditor

• ISO 14001:2004

• Dr. Arun Bajpai, ISO 9001:2008
• Lab Manager (Q)

Head Office : 544, Belgium Trade Estate Road, Old Shantivanth Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-390507.
Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantivanth Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-390507.
Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com



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POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : **PL/LT 0055**

Issue Date : **18/05/2017**

Customer's Ref. : **W.O. No. FL5001001**
DTD 21.07.2016

Sampling Location : **AAQM#4 WEIGHT BRIDGE** Wind Direction : **Calm**
Date of Sampling : **12/05/2017** Sampling Procedure : **As per table**
Sampling By : **Pollucon Laboratories Pvt. Ltd.** Protocol (purpose) : **AAQM**
Sampling Time in Hr. : **23:00** Lab ID : **LT/1705/02 [A - D]**
Sample Receipt Date : **13/05/2017** Sampling Duration : **24 Hrs.**
Date of Starting of Test : **13/05/2017** Date of Completion of Test : **18/05/2017**
Instrument Used & Calibration Due Date : **Yash RDS: PHS-RDS-21, NOS-160203120**
Cal Date : 28/09/2016 Due Date : 27/09/2017

RESULT TABLE

SR. NO.	TEST PARAMETER	UNIT	RESULT	LIMIT#	METHOD OF MEASUREMENT
1	Respirable Particulate Matter(PM ₁₀)	µg/m ³	85.63	100	IS:5182(Part 23)
2	Particulate Matter (PM _{2.5})	µg/m ³	40.38	60	Gravimetric
3	Sulphur Dioxide (SO ₂)	µg/m ³	18.25	80	IS:5182(Part 2):2001
4	Oxides of Nitrogen	µg/m ³	44.34	80	IS:5182(Part 6):1975 (Reaffirmed 1998)

Limits: Industrial, Residential, Rural and other Area Notification Dated 18th Nov.2009 as per national Ambient Air Quality Standards: CPCB New Delhi.

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• Lab Manager of Environmental (Protection) Act-1986

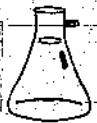
• GPCB approved
• schedule II auditor

• ISO 14001 : 2004

• Dr. Arun Bajpai, ISO 9001 : 2008
• Lab Manager (Q)

Head Office : 544, Belgium Tower, Ring Road, Opp. Linear Bus Stand, Surat-395003 (Guj.) Tel : (0261) 2455761, 2601224, 2601106

Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-3905007
Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com; Website : www.polluconlab.com

**POLLUCON LABORATORIES PVT. LTD.****TEST CERTIFICATE FOR AMBIENT AIR QUALITY MONITORING**

Customer's Name and Address :

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M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA, PIN CODE - 394510

Test Report No. : **PL/LT 0068**Issue Date : **06/07/2017**Customer's Ref. : **W.O. No. FLS001001
DTD 21.07.2016**

Sampling Location	: AAQM#3 STP Sump 2	Wind Direction	: Calm
Date of Sampling	: 23/06/2017	Sampling Procedure	: As per table
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: AAQM
Sampling Time In Hr.	: 20:30	Lab ID	: LT/1706/01 [A - D]
Sample Receipt Date	: 24/06/2017	Sampling Duration	: 24 Hrs.
Date of Starting of Test	: 24/06/2017	Date of Completion of Test	: 29/06/2017

Yash Combo PM10 & PM2.5 Diff Rotameter Yash Model Nos-PNS-Combo
PM10 SAMPLER DGM G1.6 14697610,2014
PM2.5 SAMPLER DGM G1.6 14697612,2014
Cal.Date : 28/05/2016 Due Date : 27/05/2018

RESULTS

SR. NO.	TEST PARAMETERS	UNIT	RESULTS	LIMIT#	METHOD OF MEASUREMENT
1	Respirable Particulate Matter(PM ₁₀)	µg/m ³	81.24	100	IS:5182(Part 23)
2	Particulate Matter (PM _{2.5})	µg/m ³	47.01	60	Gravimetric
3	Sulphur Dioxide (SO ₂)	µg/m ³	19.16	80	IS:5182(Part 2):2001
4	Oxides of Nitrogen	µg/m ³	45.69	80	IS:5182(Part 6):1975 (Reaffirmed 1998)

Limit#: Industrial, Residential, Rural and other Area Notification Dated 16th Nov.2009 as per national Ambient Air Quality Standards, CPCB New Delhi.

H.T. Shah**Lab Manager**

• FSSAI Approved Lab • Recognised by MoEF, New Delhi Under
 Section 12 of Environmental (Protection) Act-1986

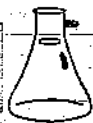
• GPCB approved
 schedule II auditor

• ISO 14001:2004

• **Dr. Arun Bajpai** • ISO 9001:2008
Lab Manager (Q)

Head Office : 544, Belgium Road, Ring Road, P. O. Box 100, Gandhinagar, (Guj.) Pin - 390002, 2601224, 2601106

Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinathi Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-3905007
 Tele : (0261) 2635750; 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**TEST CERTIFICATE FOR AMBIENT AIR QUALITY MONITORING**

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M/S. I & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : **PL/LT 0069**Issue Date : **06/07/2017**Customer's Ref. : **W.O. No. FLS001001
DTD 21.07.2016**

Sampling Location	: AAQM#4 WEIGHT BRIDGE	Wind Direction	: Calm
Date of Sampling	: 23/06/2017	Sampling Procedure	: As per table
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: AAQM
Sampling Time in Hr.	: 24:45	Lab ID	: LT/1706/02 [A - D]
Sample Receipt Date	: 24/06/2017	Sampling Duration	: 24 Hrs.
Date of Starting of Test	: 24/06/2017	Date of Completion of Test	: 29/06/2017
Instrument Used & Calibration Due Date	Yash RDS: PHS-RDS-21, NOS-160203120 Cal Date : 28/09/2016 Due Date : 27/09/2017		

RESULT TABLE

Sr. NO.	TEST PARAMETER	UNIT	RESULT	LIMIT#	METHOD OF MEASUREMENT
1	Respirable Particulate Matter(PM ₁₀)	µg/m ³	75.41	100	IS:5182(Part 23)
2	Particulate Matter (PM _{2.5})	µg/m ³	42.08	60	Gravimetric
3	Sulphur Dioxide (SO ₂)	µg/m ³	13.83	80	IS:5182(Part 2):2001
4	Oxides of Nitrogen	µg/m ³	36.79	80	IS:5182(Part 6):1975 (Reaffirmed 1998)

Limit#: Industrial, Residential, Rural and other Area Notification Dated 18th Nov.2009 as per national Ambient Air Quality Standards, CPCB New Delhi.

H.T. Shah**Lab Manager**

● FSSAI Approved Lab ● Recognised by MoEF, New Delhi Under
 Section 12 of Environmental (Protection) Act-1986

● GPCB approved
 schedule II auditor

● ISO 14001 : 2004

● Dr. Arun Bajpai

● ISO 9001 : 2008

Lab Manager (Q)

Head Office : 544, Belgium Road, Hazira, Taluka: Surat-395003 (Guj.) Tel : (0261) 2455751, 2601224, 2601106

Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-390500.

Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**POLLUCON** LABORATORIES PVT. LTD.**TEST CERTIFICATE FOR AMBIENT AIR QUALITY MONITORING**

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Customer's Name and Address :

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE – 394510

Test Report No. : **PL/LT 0081**
 Issue Date : **05/08/2017**
 Customer's Ref. : **W.O : FL5001153**
DTD:20.06.2017

Sampling Location	: AAQM# 1 STP Plant	Wind Direction	: Calm
Date of Sampling	: 12/07/2017	Sampling Procedure	: As per table
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: AAQM
Sampling Time in Hr.	: 20:40	Lab ID	: LT/1707/01 [A - D]
Sample Receipt Date	: 13/07/2017	Sampling Duration	: 24 Hrs.
Date of Starting of Test	: 13/07/2017	Date of Completion of Test	: 18/07/2017

Instrument Used & Calibration Due Date : **Yash Combo PM10 & PM2.5 Diff Rotameter Yash Model Nos-PNS- Combo**
PM10 SAMPLER DGM G1.6 14697610,2014
PM2.5 SAMPLER DGM G1.6 14697612,2014
Cal.Date : 28/05/2017 Due Date : 27/05/2018

RESULTS

SR. NO.	TEST PARAMETERS	UNIT	RESULTS	LIMIT#	METHOD OF MEASUREMENT
1	Respirable Particulate Matter(PM ₁₀)	µg/m ³	69.33	100	IS:5182(Part 23)
2	Particulate Matter (PM _{2.5})	µg/m ³	31.25	60	Gravimetric
3	Sulphur Dioxide (SO ₂)	µg/m ³	17.59	80	IS:5182(Part 2):2001
4	Oxides of Nitrogen	µg/m ³	28.75	80	IS:5182(Part 6):1975 (Reaffirmed 1998)

Limit#: Industrial, Residential, Rural and other Area Notification Dated 18th Nov.2009 as per national Ambient Air Quality Standards, CPCB New Delhi.

CC & A: AWH-87212 Issued Date: 20/07/2017 Valid up to: 22/05/2022

H.T. Shah**Lab Manager**

● FSSAI Approved Lab
 Recognised by MoEF, New Delhi Under
 Sec. 12 of Environmental (Protection) Act-1986

● GPCB approved
 schedule II auditor

● ISO 14001:2004 ● OHSAS 18001:2008

Dr. Arun Bajpai**Lab Manager**

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Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-390500
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**TEST CERTIFICATE FOR AMBIENT AIR QUALITY MONITORING**

Customer's Name and Address :

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M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : **PL/LT 0082**Issue Date : **05/08/2017**Customer's Ref. : **W.O : FLS001153
DTD:20.06.2017**

Sampling Location	: AAQM# 2 Near Porta Cabin	Wind Direction	: Calm
Date of Sampling	: 12/07/2017	Sampling Procedure	: As per table
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: AAQM
Sampling Time in Hr.	: 24:30	Lab ID	: LT/1707/02
Sample Receipt Date	: 13/07/2017	Sampling Duration	: 24 Hrs.
Date of Starting of Test	: 13/07/2017	Date of Completion of Test	: 18/07/2017
Instrument Used & Calibration Due Date	: Yash RDS: PHS-RDS-21, NOS-160203120 Cal Date : 28/09/2016 Due Date : 27/09/2017		

RESULT TABLE

SR. NO.	TEST PARAMETER	UNIT	RESULT	LIMIT #	METHOD OF MEASUREMENT
1	Respirable Particulate Matter (PM ₁₀)	µg/m ³	75.26	100	IS:5182(Part 23)
2	Particulate Matter (PM _{2.5})	µg/m ³	41.97	60	Gravimetric
3	Sulphur Dioxide (SO ₂)	µg/m ³	21.50	80	IS:5182(Part 2):2001
4	Oxides of Nitrogen	µg/m ³	37.71	80	IS:5182(Part 6):1975 (Reaffirmed 1998)
5	Carbon Monoxide as CO	mg/m ³	0.76	4.0	NDIR Digital Gas Analyzer
6	Benzene as C ₆ H ₆	µg/m ³	BDL*	5.0	IS-5182 (Part XI):2006/CPCB Method
7	Ammonia (NH ₃)	µg/m ³	34.28	400	CPCB Method (Vol.I,May-2011)
8	Ozone as O ₃	µg/m ³	26.29	100	IS 5182 (PART IX) 1974 / CPCB Method (Vol.I,May-2011)
9	Lead as Pb	µg/m ³	BDL*	1.0	CPCB Method (Vol.I,May-2011)
10	Benzo (a) Pyrene (BaP)- particulate phase only	µg/m ³	BDL*	1.0	CPCB Method (Vol.I,May-2011)
11	Arsenic as As	µg/m ³	BDL*	6.0	CPCB Method (Vol.I,May-2011)
12	Nickel as Ni	µg/m ³	BDL*	20	CPCB Method (Vol.I,May-2011)

Limit#: Industrial, Residential, Rural and other Area Notification Dated 16th Nov.2009 as per national Ambient Air Quality Standards, CPCB New Delhi.

CC & A: AWH-87212 Issued Date: 20/07/2017 Valid up to: 22/05/2022

BDL*: Below Detection Limit, Minimum Detection limit: Lead as Pb (µg/m³):0.5, Benzo (a) Pyrene (BaP) - particulate phase only (ng/m³): 0.5, Nickel as Ni (ng/m³):10, Benzene as C₆H₆ (µg/m³): 2, Arsenic as As (ng/m³): 2.

H.T. Shah**Lab Manager**

• FSSAI Approved Lab Recognised by MoEF, New Delhi Under Sec. 12 of Environmental (Protection) Act-1986

• GPCB approved schedule II auditor

• ISO 14001 : 2004

Dr. Arun Bajpai**Lab Manager (C)**

• ISO 9001 : 2008

Head Office : 544, Belgium Tower, Ring Road, Opp. Linear Bus Stand, Surat-395003. (Guj.) Tele : (0261) 2455751; 2601224, 2601106

Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-390500
 Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**TEST CERTIFICATE FOR AMBIENT AIR QUALITY MONITORING**QR/5.10/32C
Page: 1 of 1

Customer's Name and Address :

**M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510**Test Report No. : **PL/LT 0093**
Issue Date : **22/08/2017**
Customer's Ref. : **W.O : FLS001153
DTD:20.06.2017**

Sampling Location	: AAQM# 2 Near Weightbridge	Wind Direction	: Calm
Date of Sampling	: 11/08/2017	Sampling Procedure	: As per table
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: AAQM
Sampling Time in Hr.	: 24:30	Lab ID	: LT/1708/02 [A - D]
Sample Receipt Date	: 12/08/2017	Sampling Duration	: 24 Hrs.
Date of Starting of Test	: 12/08/2017	Date of Completion of Test	: 18/08/2017
Instrument Used & Calibration Due Date	Yash RDS: PHS-RDS-21, NOS-160203120 Cal Date : 28/09/2016 Due Date : 27/09/2017		

RESULT TABLE

SR. NO.	TEST PARAMETER	UNIT	RESULT	LIMIT#	METHOD OF MEASUREMENT
1	Respirable Particulate Matter(PM ₁₀)	µg/m ³	67.14	100	IS:5182(Part 23)
2	Particulate Matter (PM _{2.5})	µg/m ³	32.74	60	Gravimetric
3	Sulphur Dioxide as SO ₂	µg/m ³	16.24	80	IS:5182(Part 2):2001
4	Oxides of Nitrogen as NO _x	µg/m ³	30.22	80	IS:5182(Part 6):1975 (Reaffirmed 1998)

Limit#: Industrial, Residential, Rural and other Area Notification Dated 16th Nov,2009 as per national Ambient Air Quality Standards, CPCB New Delhi.
CC & A: AWH-87212 Issued Date: 20/07/2017 Valid up to: 22/05/2022


H.T. Shah
 Lab Manager


Dr. Arun Bajpai
 Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

● FSSAI Approved Lab ● Recognised by MoEF, New Delhi Under Sec. 12 of Environmental (Protection) Act-1986 ● GPCB approved schedule II auditor ● ISO 14001 : 2004 ● OHSAS 18001 : 2007 ● ISO 9001 : 2008

Head Office : 544, Belgium Tower, Ring Road, Opp. Linear Bus Stand, Surat-395003. (Guj.) Tele : (0261) 2455751, 2601224, 2601106
 Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-390501
 Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com



POLLUCON LABORATORIES PVT. LTD.

TEST CERTIFICATE FOR AMBIENT AIR QUALITY MONITORING

QR/5.10/32C

Page: 1 of 1

Customer's Name and Address :

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : **PL/LT 0103**

Issue Date : **29/09/2017**

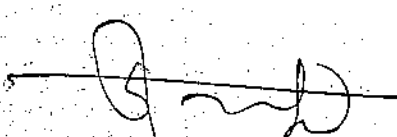
Customer's Ref. : **W.O : FL5001153**
DTD:20.06.2017

Sampling Location	: AAQM# 1 Near Porta Cabin	Wind Direction	: Calm
Date of Sampling	: 07/09/2017	Sampling Procedure	: As per table
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: AAQM
Sampling Time in Hr.	: 20:35	Lab ID	: LT/1709/04[A-D]
Sample Receipt Date	: 08/09/2017	Sampling Duration	: 24 Hrs.
Date of Starting of Test	: 08/09/2017	Date of Completion of Test	: 18/09/2017
Instrument Used & Calibration Due Date	: POLLTECH PEM-HVF-10Sr, No.: 182 Cal.Date : 13/05/2017 Due Date : 12/05/2018		

RESULTS

SR. NO.	TEST PARAMETERS	UNIT	RESULTS	LIMIT#	METHOD OF MEASUREMENT
1	Respirable Particulate Matter(PM ₁₀)	µg/m ³	82.39	100	IS:5182(Part 23)
2	Particulate Matter (PM _{2.5})	µg/m ³	46.62	60	Gravimetric
3	Sulphur Dioxide as SO ₂	µg/m ³	15.31	80	IS:5182(Part 2):2001
4	Oxides of Nitrogen as NOx	µg/m ³	29.04	80	IS:5182(Part 6):1975 (Reaffirmed 1998)

Limit#: Industrial, Residential, Rural and other Area Notification Dated 18th Nov.2009 as per national Ambient Air Quality Standards, CPCB New Delhi.
CC & A: AWH-87212 Issued Date: 20/07/2017 Valid up to: 22/05/2022


H.T. Shah
Lab Manager


Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

FSSAI Approved Lab • Recognised by MoEF, New Delhi Under Sec. 12 of Environmental (Protection) Act-1986 • GPCB approved schedule II auditor • ISO 14001 : 2004 • OHSAS 18001 : 2007 • ISO 9001 : 2008

Head Office : 544, Belgium Tower, Ring Road, Opp. Linear Bus Stand, Surat-395003. (Guj.) Tele : (0261) 2455751, 2601224, 2601106
Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-3905007.
Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**POLLUCON** LABORATORIES PVT. LTD.**TEST CERTIFICATE FOR AMBIENT AIR QUALITY MONITORING**

QR/5.10/32C

Page: 1 of 1

Customer's Name and Address :

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : **PL/LT 0104**
Issue Date : **29/09/2017**
Customer's Ref. : **W.O : FL5001153**
DTD:20.06.2017

Sampling Location	: AAQM# 2 Near STP	Wind Direction	: Calm
Date of Sampling	: 07/09/2017	Sampling Procedure	: As per table
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: AAQM
Sampling Time in Hr.	: 24:45	Lab ID	: LT/1709/05[A-D]
Sample Receipt Date	: 08/09/2017	Sampling Duration	: 24 Hrs.
Date of Starting of Test	: 08/09/2017	Date of Completion of Test	: 18/09/2017
Instrument Used & Calibration Due Date	: POLLTECH PEM-HVF-10Sr. No.: 118 Cal.Date : 13/05/2017 Due Date : 12/05/2018		

RESULT TABLE

SR. NO.	TEST PARAMETER	UNIT	RESULT	LIMIT#	METHOD OF MEASUREMENT
1	Respirable Particulate Matter(PM ₁₀)	µg/m ³	74.19	100	IS:5182(Part 23)
2	Particulate Matter (PM _{2.5})	µg/m ³	35.09	60	Gravimetric
3	Sulphur Dioxide as SO ₂	µg/m ³	19.69	80	IS:5182(Part 2):2001
4	Oxides of Nitrogen as NOx	µg/m ³	36.71	80	IS:5182(Part 6):1975 (Reaffirmed 1998)

Limit#: Industrial, Residential, Rural and other Area Notification Dated 16th Nov.2009 as per national Ambient Air Quality Standards, CPCB New Delhi.
CC & A: AWH-87212 Issued Date: 20/07/2017 Valid up to: 22/05/2022


H.T. Shah
Lab Manager


Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

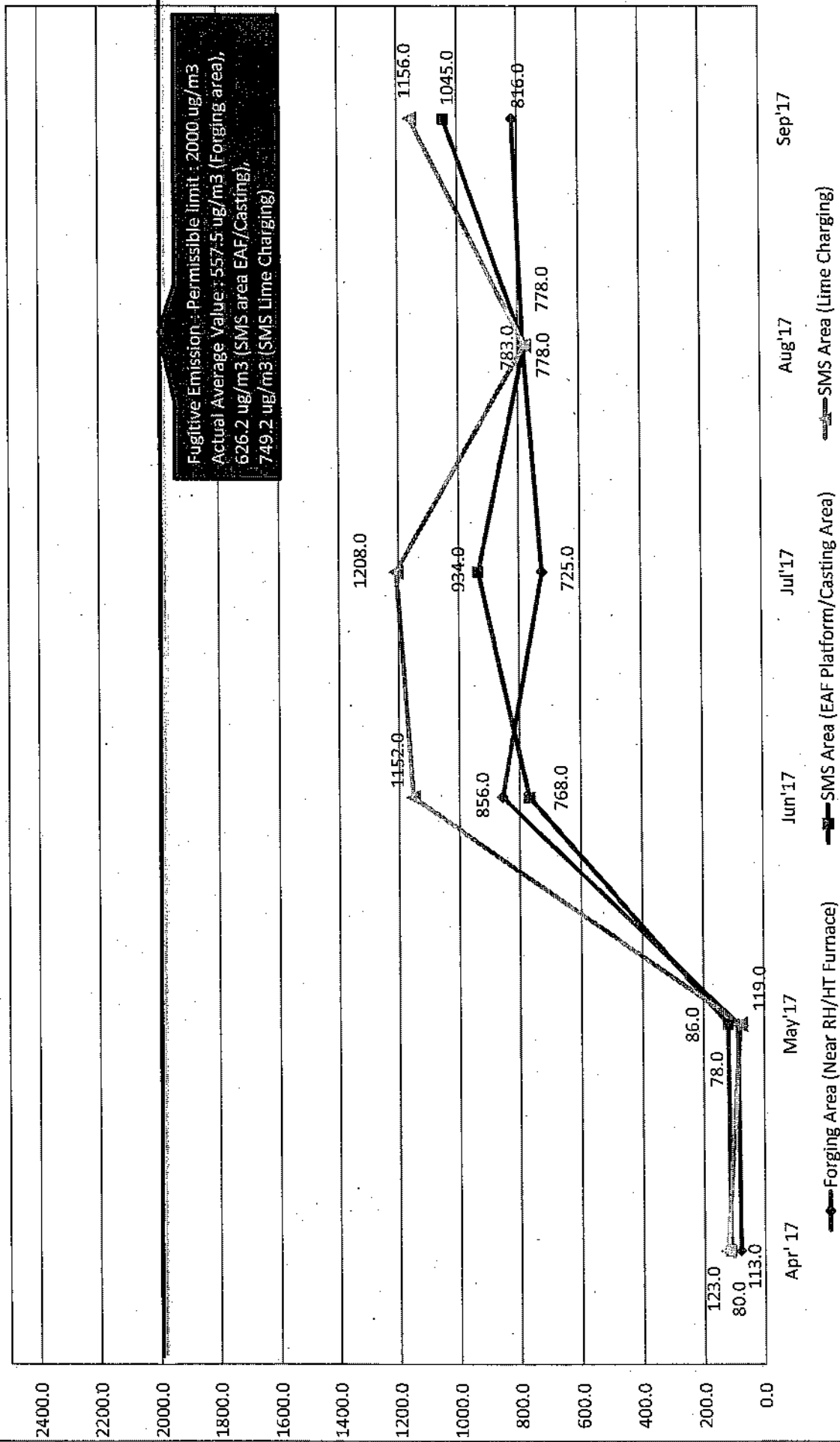
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Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

Annexure 3:
Work Area Monitoring Reports

Work Area Monitoring Report, Dust level in ug/m3

(Monitoring Frequency : Monthly through M/s Pollucon Laboratory, MoEF Approved)



FORM NO. 37

(Prescribed under Rule 12-B)

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

CUSTOMER'S NAME AND ADDRESS: L & T SPECIAL STEEL & HEAVY FORGIENS, HAZIRA MANUFACTURING COMPLEX,
POST: BHATA, DIST: SURAT, GUJARAT, INDIA.

Issue Date: 01.05.2017
Sampling Date: 21.04.2017 & 22.04.2017

Name of the Department/Plant:

Near RH Furnace

Raw Material

Metal

Distance from source

Minimum 10 m distance

Instrumex Black Rota Meter (0 - 5 LPM)

Instrument Used

Sr. No.: ABR/077

Date of calibration: 16.04.2016

Due Date of calibration: 15.04.2017

Sampling Time in Hrs.

23:30 to 00:30

Sr. No	Location/ Operation Mentioned	Identified contaminant	Sampling instrument used	Airborne Contamination		Average	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 letter)
				No. of samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
		1	Dust Particulate	1	0.5-20 mg/m ³	0.75 mg/m ³	15 mg/m ³	IS 5182 (Part IV)	03 person working			
	Near RH Furnace	2	Carbon Monoxide as CO	1	0.1-1 mg/m ³	0.24 mg/m ³	440 mg/m ³ STEL	Digital Gas Analyzer	At Sampling Time			Mr. Mukesh Kachadiya

as per OSHA Permissible Exposure Limit (PEL) for General Industry, & factory act limit, STEL: Short Term Exposure Limit.



FORM NO. 37

(Prescribed under Rule 12-B)

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

CUSTOMER'S NAME AND ADDRESS: L & T SPECIAL STEEL & HEAVY FORGIENS, HAZIRA MANUFACTURING COMPLEX,
POST: BHAYA, DIST: SURAT, GUJARAT, INDIA.

Issue Date: 01.05.2017
Sampling Date: 21.04.2017 & 22.04.2017

Name of the Department/Plant:

Lime Charging System

Raw Material

Lime

Distance from source

Minimum 10 m distance

Handy Sampler Politech Model No. PEM-HAS-113

Instrument Used

Sr. No: 308

Date of calibration: 16.04.2016

Due Date of calibration: 15.04.2017

Sampling Time in Hrs.

23:05 to 00:05

Sr. No	Location/ Operation Mentioned	Identified contaminant	Sampling instrument used	Airborne Contamination		Average	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 letter)
				No. of samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
Lime Charging System	1	Dust Particulate	Dust Collector	1	0.5-20 mg/m ³	1.22 mg/m ³	15 mg/m ³	IS 5182 (Part IV)	05 person working At Sampling Time			
	2	Carbon Monoxide as CO	Digital Gas Analyzer/ Recorder	1	0.1-1 mg/m ³	0.21 mg/m ³	440 mg/m ³ STEL	Digital Gas Analyzer				Mr. Mukesh Pathadiya

*As per OSHA Permissible Exposure Limit (PEL) for General Industry, a factory act limit, STEL - Short Term Exposure Limit



FORM NO. 37

(Prescribed under Rule 12-B)

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

CUSTOMER'S NAME AND ADDRESS: L & T SPECIAL STEEL & HEAVY FORGIENS, HAZIRA MANUFACTURING COMPLEX,
POST: BHATA, DIST: SURAT, GUJARAT, INDIA.

Issue Date: 01.05.2017
Sampling Date: 21.04.2017 & 22.04.2017

Name of the Department/Plant.

SMS Area EAF Platform Area

Raw Material

Distance from source.

Minimum 10 m distance

Handy Sampler Politech Model No: PEM-HAS-113

Sr. No: 208

Date of calibration: 16.04.2016

Due Date of calibration: 15.04.2017

23:45 to 00:45

Sampling Time in Hrs.

Sr. No	Location/ Operation. Mentioned	Identified contaminant	Sampling instrument used	Airborne Contamination		Average	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 letter)
				No. of samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
	SMS Area EAF Platform Area	1 Dust Particulate	Dust Collector	1	0.5-20 mg/m ³	1.15 mg/m ³	15 mg/m ³	IS 5182 (Part IV)	04 person working At			Mr. Mukesh Kachhariya
		2 Carbon Monoxide as CO	Digital Gas Analyzer/ Pictler	1	0.1-1 mg/m ³	0.17 mg/m ³	440 mg/m ³ STEL	Digital Gas Analyzer				

Permissible Exposure Limit (PEL) for General Industry, # factory activity, STEL: Short Term Exposure Limit





POLLUCON LABORATORIES PVT. LTD.

TEST CERTIFICATE FOR HEAT STRESS MONITORING

Customer's Name and Address :

QR/5.10/32

Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD,
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510.

Test Report No. : PL/LT 0052

Issue Date : 01/05/2017

Customer's Ref. : W.O. No. FLS001001
DTD. 21.07.2016

HEAT STRESS RESULTS

Sr. No.	Monitoring Date	Sampling Time Hr.	Sampling Location	Temperature °C	Humidity %	Heat Stress Index
1	21/04/2017	23:05	Lime Charging System	29	43	33
2	21/04/2017	23:30	RH Furnace Area	29	46	33
3	21/04/2017	23:45	EAF Platform Area	30	44	35

Humidex 1 General Controls	Action Recommended
30 - 37	Wear full symptoms and extra water
38 - 39	Work with 15 minutes/hour relief
40 - 41	Work with 30 minutes/hour relief
42 - 44	Work with 45 minutes/hour relief
45 +	Hazardous to continue physical activity

*For Humidex ranges above 45, heat stress should be managed as per the ACCU-TLV.
Heat Stress Method as per Occupational Health and Safety Council of Ontario (OHSCU)

H.T. Shah
Lab Manager

Dr. Arun Bajpai
Lab Manager (Q)

• FSSAI Approved Lab • Recognised by Ministry of Health & Family Welfare, Govt. of India • ISO 18001:2007 • ISO 9001:2008
Sec. 12 of Environmental (Protection) Act-1986 • Schedule II auditor

Note: This report is subject to terms & conditions mentioned on page 1 of 1
Head Office : 544, Belgium Tower, Ring Road, Opp. Linear Bus Stand, Surat-395003, (Guj.) Tele : (0261) 2455761, 2601224, 2601106
Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navliyan Circle, Udhana Magdalla Road, Surat-3905007
Tele : (0261) 2635750, 2635761 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

FORM NO. 37

(Prescribed under Rule 12-B)

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

CUSTOMER'S NAME AND ADDRESS: L & T SPECIAL STEEL & HEAVY FORGIENS, HAZIRA MANUFACTURING COMPLEX,
POST: BHATA, DIST: SURAT, GUJARAT, INDIA.

Issue Date: 22.05.2017

Sampling Date: 12.05.2017 & 13.05.2017

Name of the Department/Plant:

Lime Charging System

Raw Material

Lime

Distance from source

Minimum 10 m distance

Instrument Used

Politech Model No. PEM-HAS-113 Sr. No: 308

Date of calibration: 05/04/2017

Due Date of calibration : 04/04/2018

Sampling Time in Hrs.

23:30 to 00:30

Sr. No	Location/ Operation Mentioned	Identified contaminant	Sampling Instrument used	Airborne Contamination		Average	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 letter)
				No. of samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
Lime Charging System	1	Dust Particulate	Dust Collector	1	0.5-20 mg/m ³	0.828 mg/m ³	15 mg/m ³	IS 5182 (Part IV)	06 person working At Sampling time	—	<i>Mukesh Patel</i>	Mr. Mukesh Patel
	2	Carbon Monoxide as CO	Digital Gas Analyzer/Bladder	1	0.1-1 mg/m ³	0.18 mg/m ³	440 mg/m ³ STEL	Digital Gas Analyzer				

*As per OSHA Permissible Exposure Limit (PEL) for General Industry, # Factory act limit STEL : Short Term Exposure Limit



FORM NO. 37

(Prescribed under Rule 12-B)
Register containing particulars of monitoring of working environment required under Section 7-A (a) (e).

CUSTOMER'S NAME AND ADDRESS: L & T SPECIAL STEEL & HEAVY FORGIENS, HAZIRA MANUFACTURING COMPLEX,
POST: BHATA, DIST: SURAT, GUJARAT, INDIA.

Issue Date: 22.05.2017

Sampling Date: 12.05.2017 & 13.05.2017

Name of the Department/Plant.

SMS Area EAF Platform Area

Raw Material

Distance from source

Minimum 10 m distance

Politech Model No. PEM-HAS-113 Sr. No: 208

Date of calibration: 05/04/2017

Due Date of calibration: 04/04/2018

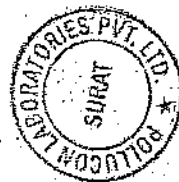
Instrument Used

Sampling Time in Hrs.

23:00 to 23:45

Sr. No	Location/ Operation Mentioned	Identified contaminant	Sampling instrument used	Airborne Contamination		Average	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 letter)
				No. of samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
	SMS Area EAF Platform Area	1 Dust Particulate	Dust Collector	1	0.5-20 mg/m ³	1.375 mg/m ³	15 mg/m ³	IS 5182 (Part IV)	03 person working At			Mr. Mukesh Patel
		2 Carbon Monoxide as CO	Digital Gas Analyzer/ Bladder	1	0.1-1 mg/m ³	0.18 mg/m ³	440 mg/m ³ STEL	Digital Gas Analyzer	Sampling Time			

*as per OSHA Permissible Exposure Limit (PEL) for General Industry, * Factory act limit STEL : Short Term Exposure Limit.



(Prescribed under Rule 12-B)
Register containing particulars of monitoring of working environment required under Section 7-A (a) (e).

CUSTOMER'S NAME AND ADDRESS: L & T SPECIAL STEEL & HEAVY FORGIENS, HAZIRA MANUFACTURING COMPLEX,
POST: BHATA, DIST: SURAT, GUJARAT, INDIA.

Issue Date: 22.05.2017

Sampling Date: 12.05.2017 & 13.05.2017

Name of the Department/Plant:

Near RH Furnace

Raw Material

Metals

Distance from source

Minimum 10 m distance

ECOTECH Personal Sampler

APM 800, Sr.No.: 926-DTA-2014.

Rota Meter (Sr. No.13/1010) (0 - 3 LPM)

Date of calibration: 30/05/2016

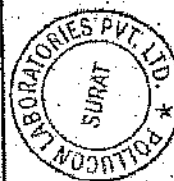
Due Date of calibration: 29/05/2017

Sampling Time in Hrs:

23:45 to 00:45

Sr. No	Location/ Operation Mentioned	Identified contaminant	Sampling Instrument used	Airborne Contamination		Average	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 letter)
				No. of samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
		1 Dust Particulate	Dust Collector	1	0.5-20 mg/m ³	0.916 mg/m ³	15 mg/m ³	15 5182 (Part IV)	05 person working At			Mr. Mukesh Patel
		2 Carbon Monoxide as CO	Digital Gas Analyzer/ Blauder	1	0.1-1 mg/m ³	0.15 mg/m ³	440 mg/m ³ STEL	Digital Gas Analyzer	Sampling Time			

*as per OSHA Permissible Exposure Limit (PEL) for General Industry, # factory act limit, STEL; Short Term Exposure Limit





POLLUCON LABORATORIES PVT. LTD.

TEST CERTIFICATE FOR HEAT STRESS MONITORING

Customer's Name and Address :

QR/5.10/32

Page: 1 of 1

**M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.,
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510.**

Test Report No. : **PL/LT 0063**

Issue Date : **20/05/2017**

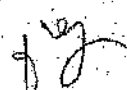
Customer's Ref. : **W.D. No. FLSDB1001
DTD 21.07.2016**


HEAT STRESS RESULTS

Sr. No.	Monitoring Date	Sampling Time Hr.	Sampling Location	Temperature °C	Humidity %	Heat Stress Index
1	12/05/2017	23:30	Line Charging System	30	44	35
2	12/05/2017	23:45	RH Furnace Area	29	42	32
3	12/05/2017	23:00	EAF Platform Area	30	43	34

Humidex 1 General Controls	Action Recommended
30 - 37	Warn for symptoms and extra water
38 - 39	Work with 15 minutes/hour relief
40 - 41	Work with 30 minutes/hour relief
42 - 44	Work with 45 minutes/hour relief
45 +	Hazardous to continue physical activity

*For Humidex ranges above 45, heat stress should be managed as per the ACGIH TLV.
*Heat Stress Method as per Occupational Health and Safety Council of Ontario (OHSCO).


H.T. Shah
Lab Manager


Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.
● FSSAI Approved Lab ● Recognised by Haryana New Sector Policy, Sec. 12 of Environmental (Protection) Act-1986 ● ISO 9001:2008 ● ISO 14001:2004 ● OHSAS 18001:2007 ● ISO 9001:2008
● ISO 14001:2004 ● OHSAS 18001:2007 ● ISO 9001:2008

Head Office : 644, Belgium Tower, Ring Road, Opp. Linear Bus Stand, Surat-395003. (Guj.), Tele : (0261) 2455751, 2601224, 2601106
Branch Office : Plot No: 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantimath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-3905007.
Tele : (0261) 2635750-2635751 E-mail: pollucon@gmail.com; Website: www.polluconlab.com

**POLLUCON** LABORATORIES PVT. LTD.**TEST CERTIFICATE FOR ILLUMINATION LUX**

Customer's Name and Address :

QR/5.10/32C
Page: 1 of 1

M/s. L&T SPECIAL STEEL & HEAVY FORGINGS HAZIRA MANUFACTURING COMPLEX, POST: BHATA, DIST.SURAT, GUJARAT, INDIA.	Test Report No. : PL/LT 0080 Issue Date : 06/07/2017 Customer's Ref. : PO NO. FLS000384 DT.08.07.2013
---	--

Date of Sampling :	As per table
Sampling By :	Pollucon Laboratories Pvt. Ltd.
Sampling Location :	As per table
Instrument Used :	Digital Lux Meter Sr No: S429938, MODEL: LX 101B, MAKE: METEK Date of Calibration: 05.12.2016 Due Date of Calibration: 04.12.2017

RESULT TABLE

SR NO	NAME OF THE LOCATION*	SAMPLING DATE	SAMPLING TIME (Hr.)	OBSERVATION Illumination Lux (lx)
1	SMS Area Near Scrap Storage	23/06/2017	10:10	260
2	Near V/D Moulding Area	23/06/2017	10:45	320
3	Near Reheating Furnace Area	23/06/2017	11:30	286
4	WTP (Water Treatment Plant)	23/06/2017	12:05	208
5	Boiler Area	23/06/2017	12:35	342
6	Compressor Area	23/06/2017	13:00	276

LIMIT*	
Table 2.3.3. Minimum Limits For Workplace Illumination Intensity	
Location / Activity	Light Intensity
Emergency light	10 lux
Outdoor non working areas	20 lux
Simple orientation and temporary visits (machine storage, garage, warehouse)	50 lux
Workspace with occasional visual tasks only (corridors, stairways, lobby, elevator, auditorium, etc.)	100 lux
Medium precision work (simple assembly, rough machine works, welding, packing, etc.)	200 lux
Precision work (reading, moderately difficult assembly, sorting, checking, medium bench and machine works, etc.), offices.	500 lux
High-precision work (difficult assembly, sewing, color inspection, fine sorting etc.)	1,000 - 3,000 lux

* As per IFC International Finance Corporation World Bank Group Environmental, Health, and Safety (EHS) Guidelines GENERAL EHS GUIDELINES: OCCUPATIONAL HEALTH AND SAFETY, APRIL 30, 2007
monitoring Location according by client.


H.T. Shah
Lab Manager

Dr. Arun Bajpai
Lab Manager (Q)

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Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

FORM NO. 37

(Prescribed under Rule 12-B)

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

CUSTOMER'S NAME AND ADDRESS: L & T SPECIAL STEEL & HEAVY FORGIENS, HAZIRA MANUFACTURING COMPLEX,
POST: BHATA, DIST: SURAT, GUJARAT, INDIA.

Issue Date: 06.07.2017

Sampling Date: 23.06.2017

Name of the Department/Plant.

Lime Charging System

Raw Material

Lime

Distance from source

Minimum 10 m distance

Instrument Used

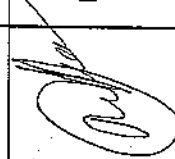
Politech Model No. PEM-HAS-113 Sr. No: 308

Date of calibration: 05/04/2017

Due Date of calibration : 04/04/2018

Sampling Time in Hrs.

23:45 to 00:30

Sr. No	Location/ Operation Mentioned	Identified contaminant	Sampling instrument used	Airborne Contamination		Average	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 letter)
				No. of samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
	Lime Charging System	1 Dust Particulate	Dust Collector	1	0.5-20 mg/m ³	0.951 mg/m ³	15* mg/m ³	IS 5182 (Part IV)	06 person working At Sampling Time	---		MR. MUKESH PATEL
		2 Carbon Monoxide as CO	Digital Gas Analyzer/ Bladder	1	0.1-1 mg/m ³	0.23 mg/m ³	440 mg/m ³ STEL	Digital Gas Analyzer				

*As per OSHA Permissible Exposure Limit (PEL) for General Industry, # factory act limit STEL : Short Term Exposure Limit

FORM NO. 37

(Prescribed under Rule 12-B)

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

CUSTOMER'S NAME AND ADDRESS: L & T SPECIAL STEEL & HEAVY FORGIENS, HAZIRA MANUFACTURING COMPLEX,
POST: BHATA, DIST: SURAT, GUJARAT, INDIA.

Issue Date: 06.07.2017

Sampling Date: 23.06.2017

Name of the Department/Plant.

SMS Area EAF Platform Area

Raw Material

Distance from source

Minimum 10 m distance

Instrument Used

Polltech Model No. PEM-HAS-113 Sr. No: 208

Date of calibration: 05/04/2017

Due Date of calibration: 04/04/2018

Sampling Time in Hrs.

00:10 to 00:45

Sr. No	Location/ Operation Mentioned	Identified contaminant	Sampling instrument used	Airborne Contamination		Average	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 letter)
				No. of samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
	SMS Area EAF Platform Area	1 Dust Particulate	Dust Collector	1	0.5-20 mg/m ³	1.232 mg/m ³	15* mg/m ³	IS 5182 (Part IV)	03 person working At Sampling Time			MR. MUKESH PATEL
	2 Carbon Monoxide as CO	Digital Gas Analyzer/ Bladder	1	0.1-1 mg/m ³	0.18 mg/m ³	440 mg/m ³ STEL	Digital Gas Analyzer					

*as per OSHA Permissible Exposure Limit (PEL) for General Industry, # factory act limit STEL : Short Term Exposure Limit

FORM NO. 37

(Prescribed under Rule 12-B)

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

CUSTOMER'S NAME AND ADDRESS: L & T SPECIAL STEEL & HEAVY FORGIENS, HAZIRA MANUFACTURING COMPLEX,
POST: BHATA, DIST: SURAT, GUJARAT, INDIA.

Issue Date: 06.07.2017

Sampling Date: 23.06.2017

Name of the Department/Plant.

Near RH Furnace

Raw Material

Metal

Distance from source

Minimum 10 m distance

Instrument Used

ECOTECH Personal Sampler
APM 800, Sr. No.: 926-DTA-2014
Rota Meter (Sr. No. 13/1010) (0 - 3 LPM)
Date of calibration: 30/05/2016
Due Date of calibration: 29/05/2017

Sampling Time in Hrs.

23:15 to 23:45

Sr. No	Location/ Operation Mentioned	Identified contaminant	Sampling instrument used	Airborne Contamination		Average	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 letter)
				No. of samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
Near RH Furnace	1	Dust Particulate	Dust Collector	1	0.5-20 mg/m ³	1.056 mg/m ³	15 mg/m ³	IS 5182 (Part IV)	05 person working At Sampling Time			MR. MUKESH PATEL
	2	Carbon Monoxide as CO	Digital Gas Analyzer/ Bladder	1	0.1-1 mg/m ³	0.15 mg/m ³	440 mg/m ³ STEL	Digital Gas Analyzer				

*as per OSHA Permissible Exposure Limit (PEL) for General Industry, # factory act limit, STEL: Short Term Exposure Limit

FORM NO. 37

(Prescribed under Rule 12-B)

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

CUSTOMER'S NAME AND ADDRESS: L & T SPECIAL STEEL & HEAVY FORGIENS, HAZIRA MANUFACTURING COMPLEX,
POST: BHATA, DIST: SURAT, GUJARAT, INDIA.

Sampling Date: 12.07.2017

Name of the Department/Plant.

Raw Material

Distance from source

Lime Charging System

Lime

Minimum 10 m distance

Polltech Model No. PEM-HAS-113 Sr. No: 308

Instrument Used

Date of calibration: 05/04/2017

Due Date of calibration : 04/04/2018

Sampling Time in Hrs.

23:35 TO 23:55

Sr. No	Location/ Operation Mentioned	Identified contaminant	Sampling instrument used	Airborne Contamination		Average	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 letter)
				No. of samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
Lime Charging System	1	Dust Particulate	Dust Collector	1	0.5-20 mg/m ³	1.054 mg/m ³	15* mg/m ³	IS 5182 (Part IV)	06 person working At Sampling Time			MR. MUKESH PATEL
	2	Carbon Monoxide as CO	Digital Gas Analyzer/ Bladder	1	0.1-1 mg/m ³	0.22 mg/m ³	440 mg/m ³ STEL	Digital Gas Analyzer				

*as per OSHA Permissible Exposure Limit (PEL) for General Industry, # factory act limit, STEL : Short Term Exposure Limit.



FORM NO. 37

(Prescribed under Rule 12-B)

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

CUSTOMER'S NAME AND ADDRESS: L & T SPECIAL STEEL & HEAVY FORGIENS, HAZIRA MANUFACTURING COMPLEX,
POST: BHATA, DIST: SURAT, GUJARAT, INDIA.

Sampling Date: 12.07.2017

Name of the Department/Plant.

SMS Area EAF Platform Area

Raw Material

Distance from source

Minimum 10 m distance

Instrument Used

Polltech Model No. PEM-HAS-113 Sr. No: 208

Date of calibration: 05/04/2017

Due Date of calibration: 04/04/2018

Sampling Time in Hrs.

00:30 TO 00:55

Sr. No	Location/ Operation Mentioned	Identified contaminant		Sampling instrument used	Airborne Contamination		Average	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 letter)
					No. of samples	Range							
1	2	3		4	5	6	7	8	9	10	11	12	13
SMS Area EAF Platform Area	1	Dust Particulate		Dust Collector	1	0.5-20 mg/m ³	1.292 mg/m ³	15* mg/m ³	IS 5182 (Part IV)	03 person working At Sampling Time			
	2	Carbon Monoxide as CO		Digital Gas Analyzer/ Bladder	1	0.1-1 mg/m ³	0.21 mg/m ³	440 mg/m ³ STEL	Digital Gas Analyzer				MR. MUKESH PATEL

*as per OSHA Permissible Exposure Limit (PEL) for General Industry, # factory act limit, STEL : Short Term Exposure Limit



FORM NO. 37

(Prescribed under Rule 12-B)

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

CUSTOMER'S NAME AND ADDRESS: L & T SPECIAL STEEL & HEAVY FORGIENS, HAZIRA MANUFACTURING COMPLEX,
POST: BHATA, DIST: SURAT, GUJARAT, INDIA.

Sampling Date: 12.07.2017

Name of the Department/Plant.

Near RH Furnace

Raw Material

Metal

Distance from source

Minimum 10 m distance

ECOTECH Personal Sampler

APM 800, Sr.No.: 926-DTA-2014

Rota Meter (Sr. No.13/1010) (0 - 3 LPM)

Date of calibration: 30/05/2017

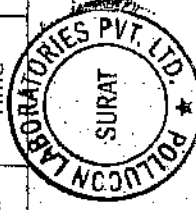
Due Date of calibration: 29/05/2018

Sampling Time in Hrs.

23:15 TO 24:45

Sr. No	Location/ Operation Mentioned	Identified contaminant	Sampling instrument used	Airborne Contamination		Average	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 letter)
1	2	3	4	No. of samples	Range	7	8	9	10	11	12	13
	Near RH Furnace	1 Dust Particulate	Dust Collector	1	0.5-20 mg/m ³	0.885 mg/m ³	15 mg/m ³	IS 5182 (Part IV)	05 person working At Sampling Time	---	<i>[Signature]</i>	MR. MUKESH PATEL
		2 Carbon Monoxide as CO	Digital Gas Analyzer/ Bladder	1	0.1-1 mg/m ³	0.16 mg/m ³	440 mg/m ³ STEL	Digital Gas Analyzer				

*as per OSHA Permissible Exposure Limit (PEL) for General Industry, # factory act limit, STEL: Short Term Exposure Limit



FORM NO. 37


(Prescribed under Rule 12-B)

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

**CUSTOMER'S NAME AND ADDRESS: L & T SPECIAL STEEL & HEAVY FORGIENS, HAZIRA MANUFACTURING COMPLEX,
POST: BHATA, DIST: SURAT, GUJARAT, INDIA.**

Sampling Date: 11.08.2017

Name of the Department/Plant.		Lime Charging System	
Raw Material		Lime	
Distance from source		Minimum 10 m distance	
Instrument Used		Polltech Model No. PEM-HAS-113 Sr. No: 308 Date of calibration: 05/04/2017 Due Date of calibration : 04/04/2018	
Sampling Time in Hrs.		23:30 TO 00:25	

Sr. No	Location/ Operation Mentioned	Identified contaminant	Sampling instrument used	Airborne Contamination		Average	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 letter)
1	2	3	4	5	6	7	8	9	10	11	12	13
	Lime Charging System	1 Dust Particulate	Dust Collector	1	0.5-20 mg/m ³	1.064 mg/m ³	15* mg/m ³	IS 5182 (Part IV)	06 person working At Sampling Time			MR. MUKESH PATEL
		2 Carbon Monoxide as CO	Digital Gas Analyzer/ Bladder	1	0.1-1 mg/m ³	0.25 mg/m ³	440 mg/m ³ STEL	Digital Gas Analyzer		---		

*as per OSHA Permissible Exposure Limit (PEL) for General Industry, # factory act limit, STEL: Short Term Exposure Limit



FORM NO. 37


(Prescribed under Rule 12-B)

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

**CUSTOMER'S NAME AND ADDRESS: L & T SPECIAL STEEL & HEAVY FORGIENS, HAZIRA MANUFACTURING COMPLEX,
POST: BHATA, DIST: SURAT, GUJARAT, INDIA.**

Sampling Date: 11.08.2017

Name of the Department/Plant.	SMS Area EAF Platform Area
Raw Material	---
Distance from source	Minimum 10 m distance
Instrument Used	Polltech Model No. PEM-HAS-113 Sr. No: 208 Date of calibration: 05/04/2017 Due Date of calibration: 04/04/2018
Sampling Time In Hrs.	22:25 TO 23:25

Sr. No	Location/ Operation Mentioned	Identified contaminant	Sampling instrument used	Airborne Contamination		Average	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 letter)
1	2	3	4	No. of samples	Range	7	8	9	10	11	12	13
	SMS Area EAF Platform Area	1 Dust Particulate	Dust Collector	1	0.5-20 mg/m ³	1.252 mg/m ³	15* mg/m ³	IS 5182 (Part IV)	03 person working At Sampling Time	—		MR. MUKESH PATEL
		2 Carbon Monoxide as CO	Digital Gas Analyzer/ Bladder	1	0.1-1 mg/m ³	0.21 mg/m ³	440 mg/m ³ STEL	Digital Gas Analyzer				

*as per OSHA Permissible Exposure Limit (PEL) for General Industry, # factory act limit, STEL : Short Term Exposure Limit



FORM NO. 37


(Prescribed under Rule 12-B)

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

CUSTOMER'S NAME AND ADDRESS: L & T SPECIAL STEEL & HEAVY FORGIENS, HAZIRA MANUFACTURING COMPLEX,
POST: BHATA, DIST: SURAT, GUJARAT, INDIA.

Sampling Date: 11.08.2017

Name of the Department/Plant.	Near RH Furnace
Raw Material	Metal
Distance from source	Minimum 10 m distance
Instrument Used	ECOTECH Personal Sampler APM 800, Sr.No.: 926-DTA-2014 Rota Meter (Sr. No.13/1010) (0 - 3 LPM) Date of calibration: 30/05/2017 Due Date of calibration: 29/05/2018
Sampling Time in Hrs.	23:20 TO 00:50

Sr. No	Location/ Operation Mentioned	Identified contaminant	Sampling instrument used	Airborne Contamination		Average	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 letter)
1	2	3	4	No. of samples	Range	7	8	9	10	11	12	13
	Near RH Furnace	1 Dust Particulate 2 Carbon Monoxide as CO	Dust Collector Digital Gas Analyzer/ Bladder	1 1	0.5-20 mg/m ³ 0.1-1 mg/m ³	1.148 mg/m ³ 0.16 mg/m ³	15* mg/m ³ 440 mg/m ³ STEL	IS 5182 (Part IV) Digital Gas Analyzer	05 person working At Sampling Time	—		MR. MUKESH PATEL

*as per OSHA Permissible Exposure Limit (PEL) for General Industry, # factory act limit, STEL: Short Term Exposure Limit



**TEST CERTIFICATE FOR ILLUMINATION LUX**

Customer's Name and Address :

QR/5.10/32C
Page: 1 of 1

M/s. L&T SPECIAL STEEL & HEAVY FORGINGS HAZIRA MANUFACTURING COMPLEX, POST: BHATA, DIST.SURAT, GUJARAT, INDIA.	Test Report No. : PL/LT 0105 Issue Date : 29/09/2017 Customer's Ref. : W.O : FLS001153 DTD:20.06.2017
---	--

Date of Sampling	: 06/09/2017
Sampling By	: Pollucon Laboratories Pvt. Ltd.
Sampling Location	: As per table Digital Lux Meter
Instrument Used	: Sr No: S429938, MODEL: LX 101B, MAKE: METEK Date of Calibration: 05.12.2016 Due Date of Calibration: 04.12.2017

RESULT TABLE

SR NO	NAME OF THE LOCATION [#]	SAMPLING DATE	SAMPLING TIME (Hr.)	OBSERVATION Illumination Lux (lx)
1	SMS Area Near Scrap Storage	06/09/2017	10:35	320
2	Near V/D Moulding Area	06/09/2017	10:45	345
3	Near Reheating Furnace Area	06/09/2017	11:00	280
4	WTP (Water Treatment Plant)	06/09/2017	11:10	240
5	Boiler Area	06/09/2017	11:25	350
6	Compressor Area	06/09/2017	11:40	270

LIMIT*	
Table 2.3.3. Minimum Limits For Workplace Illumination Intensity	
Location / Activity	Light Intensity
Emergency light	10 lux
Outdoor non working areas	20 lux
Simple orientation and temporary visits (machine storage, garage, warehouse)	50 lux
Workspace with occasional visual tasks only (corridors, stairways, lobby, elevator, auditorium, etc.)	100 lux
Medium precision work (simple assembly, rough machine works, welding, packing, etc.)	200 lux
Precision work (reading, moderately difficult assembly, sorting, checking, medium bench and machine works, etc.), offices.	500 lux
High precision work (difficult assembly, sewing, color inspection, fine sorting etc.)	1,000 - 3,000 lux

* As per IFC International Finance Corporation World Bank Group Environmental, Health, and Safety (EHS) Guidelines GENERAL EHS GUIDELINES: OCCUPATIONAL HEALTH AND SAFETY, APRIL 30, 2007

monitoring Location according by client.


H.T. Shah
Lab Manager

Dr. Arun Bajpai
Lab Manager (Q)

FSSAI Approved Lab • Recognised by MoEF, New Delhi Under

Sec. 12 of Environmental (Protection) Act-1986

• GPCB approved

• ISO 14001 : 2004

• OHSAS 18001 : 2007

• ISO 9001 : 2008

Note: This report is subject to terms & conditions mentioned overleaf

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Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

FORM NO. 37

Register containing particulars of monitoring of working environment required under Section 7-A (a) (e).
(Prescribed under Rule 12-B)

CUSTOMER'S NAME AND ADDRESS: L & T SPECIAL STEEL & HEAVY FORGIENS, HAZIRA MANUFACTURING COMPLEX,
POST: BHATA, DIST: SURAT, GUJARAT, INDIA.

Sampling Date: 06.09.2017

Name of the Department/Plant.	SMS Area EAF Platform Area
Raw Material	--
Distance from source	Minimum 10 m distance
Instrument Used	Politech Model No. PEM-HAS-113 Sr. No: 208 Date of calibration: 05/04/2017 Due Date of calibration: 04/04/2018
Sampling Time in Hrs.	22:30 TO 23:30

Sr. No	Location/ Operation Mentioned	Identified contaminant	Sampling instrument used	Airborne Contamination		Average	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 letter)
				No. of samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
	SMS Area EAF Platform Area	1 Dust Particulate	Dust Collector	1	0.5-20 mg/m ³	1.568 mg/m ³	15* mg/m ³	IS 5182 (Part IV)	03 person working At Sampling Time			
		2 Carbon Monoxide as CO	Digital Gas Analyzer/ Bladder	1	0.1-1 mg/m ³	0.16 mg/m ³	440 mg/m ³ STEL	Digital Gas Analyzer				MR. MUKESH PATEL

*as per OSHA Permissible Exposure Limit (PEL) for General Industry, # factory act limit, STEL : Short Term Exposure Limit



FORM NO. 37

(Prescribed under Rule 12-B)

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

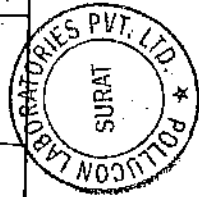
CUSTOMER'S NAME AND ADDRESS: L & T SPECIAL STEEL & HEAVY FORGIENS, HAZIRA MANUFACTURING COMPLEX,
POST: BHATA, DIST: SURAT, GUJARAT, INDIA.

Sampling Date: 06.09.2017

Name of the Department/Plant.	Near RH Furnace
Raw Material	Metal
Distance from source	Minimum 10 m distance
Instrument Used	ECOTECH Personal Sampler APM 800, Sr.No.: 926-DTA-2014 Rota Meter (Sr. No.13/1010) (0 - 3 LPM) Date of calibration: 30/05/2017 Due Date of calibration: 29/05/2018
Sampling Time in Hrs.	23:45 TO 00:20

Sr. No	Location/ Operation Mentioned	Identified contaminant	Sampling instrument used	Airborne Contamination		Average	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 letter)
1	2	3	4	No. of samples	Range	7	8	9	10	11	12	13
	Near RH Furnace	1 Dust Particulate	Dust Collector	1	0.5-20 mg/m ³	1.452 mg/m ³	15* mg/m ³	IS 5182 (Part IV)	05 person working At Sampling Time			
		2 Carbon Monoxide as CO	Digital Gas Analyzer/ Bladder	1	0.1-1 mg/m ³	0.14 mg/m ³	440 mg/m ³ STEL	Digital Gas Analyzer				MR. MUKESH PATEL

*as per OSHA Permissible Exposure Limit (PEL) for General Industry, # factory act limit, STEL: Short Term Exposure Limit



FORM NO. 37


(Prescribed under Rule 12-B)

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

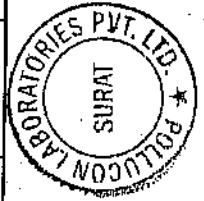
CUSTOMER'S NAME AND ADDRESS: L & T SPECIAL STEEL & HEAVY FORGIENS, HAZIRA MANUFACTURING COMPLEX,
POST: BHATA, DIST: SURAT, GUJARAT, INDIA.

Sampling Date: 06.09.2017

Name of the Department/Plant.	Lime Charging System
Raw Material	Lime
Distance from source	Minimum 10 m distance
Instrument Used	Polltech Model No. PEM-HAS-113 Sr. No: 308 Date of calibration: 05/04/2017 Due Date of calibration : 04/04/2018
Sampling Time in Hrs.	23:20 To 23:45

Sr. No	Location/ Operation Mentioned	Identified contaminant	Sampling instrument used	Airborne Contamination		Average	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 letter)
1	2	3	4	No. of samples	Range	7	8	9	10	11	12	13
	Lime Charging System	1 Dust Particulate	Dust Collector	1	0.5-20 mg/m ³	0.862 mg/m ³	15 mg/m ³	IS 5182 (Part IV)	06 person working At Sampling Time			MR. MUKESH PATEL
		2 Carbon Monoxide as CO	Digital Gas Analyzer/ Bladder	1	0.1-1 mg/m ³	0.21 mg/m ³	440 mg/m ³ STEL	Digital Gas Analyzer		--		

*as per OSHA Permissible Exposure Limit (PEL) for General Industry, # factory act limit, STEL: Short Term Exposure Limit



Annexure 4:
Noise Monitoring Reports



POLLUCON LABORATORIES PVT. LTD.

TEST CERTIFICATE FOR NOISE MONITORING

Customer's Name and Address :

QMS-10/32C
Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD. HAZIRA MANUFACTURING COMPLEX, POST: BHATHA, DIST: SURAT, GUJARAT, INDIA. PIN CODE - 394510	Test Report No : PL/LT 0050 Issue Date : 01/05/2017 Customer's Ref : W.O. No. PL5001001 DTD 21.07.2016
--	---

Date of Sampling	: 21/04/2017 & 22/04/2017
Sampling by	: Pollucon Laboratories Pvt. Ltd.
Sampling Location	: As per table
Test Method	: IS:11702
Description of Instrument Used	: Sound Level Meter MAKE: LUTRON SR. NO 281323 MODEL: SL-4033SD Calibration Date: 16.01.2017
	RANGE: 35 dB & 130 dB Due Date: 15.01.2018

RESULT TABLE

SR. NO.	NAME OF THE LOCATION	OBSERVATION			
		DAY TIME MONITORING		NIGHT TIME MONITORING	
		Date & Time (Hr.)	dB (A)	Date & Time (Hr.)	dB (A)
1	SMS Area Near Scrap Storage	22/04/2017, 10:30	74.2	21/04/2017, 23:00	73.9
2	Near V/D Moulding Area	22/04/2017, 10:55	70.5	21/04/2017, 23:10	69.2
3	Near Reheating Furnace Area	22/04/2017, 11:15	72.7	21/04/2017, 23:15	74.1
4	WTP (Water Treatment Plant)	22/04/2017, 11:40	68.2	21/04/2017, 23:30	65.4
5	Boiler Area	22/04/2017, 12:10	65.4	21/04/2017, 23:35	63.8
6	Compressor Area	22/04/2017, 12:35	68.9	21/04/2017, 23:50	66.3

LIMIT*		
Table 2.3.1. Noise Limits for Various Working Environments		
Location/Activity	Equivalent level LAeq,8h	Maximum LA max, fast
Heavy Industry (no demand for oral communication)	85 dB(A)	110 dB(A)
Light Industry (decreasing demand for oral communication)	50-65 dB(A)	110 dB(A)
Open offices, control rooms, service counters or similar	45-50 dB(A)	-
Individual offices (no disturbing noise)	40-45 dB(A)	-
Classrooms, lecture halls	35-40 dB(A)	-
Hospitals	30-35 dB(A)	40 dB(A)

H.T. Shah
Lab Manager

Dr. Arun Bajpai
Lab Manager (Q)

• FSSAI Approved Lab • Recognised by MoEF, New Delhi Under Sec. 12 of Environmental Protection Act-1986 • GPCB approved • ISO 14001:2004 • OHSAS 18001:2007 • ISO 9001:2008

Head Office : 544, Belgium Tower, Ring Road, Opp. Linear Bus Stand, Surat-395003. (Guj.) - Tele : (0261) 2455751, 2601224, 2601106
Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navivan Circle, Udhana/Magdalla Road, Surat-390507.
Tele : (0261)-2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**POLLUCON** LABORATORIES PVT. LTD.**TEST CERTIFICATE FOR NOISE MONITORING**

Customer's Name and Address :

Q7/5-10/32C
Page: 1 of 1**M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.**
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510Test Report No : **PL/LT 0053**
Issue Date : **12/05/2017**
Customer's Ref. : **W.O. No. FL5001001**
DTD 21.07.2016Date of Sampling : **12/05/2017 & 13/05/2017**
Sampling by : **Pollucon Laboratories Pvt. Ltd.**
Sampling Location : **As per table**
Test Method : **ISI:11702**
Description of Instrument Used : **Sound Level Meter MAKE: LUTRON**
SR. NO 281323 MODEL: SL-4033SD
Calibration Date: 16.01.2017
RANGE: 35 dB & 130 dB
Due Date: 15.01.2018**RESULT TABLE**

SR. NO.	NAME OF THE LOCATION	OBSERVATION			
		DAY TIME MONITORING		NIGHT TIME MONITORING	
		Date & Time (Hr.)	dB (A)	Date & Time (Hr.)	dB (A)
1	SMS Area Near Scrap Storage	12/05/2017, 10:45	73.2	13/05/2017, 10:50	70.8
2	Near V/D Moulding Area	12/05/2017, 11:10	69.4	13/05/2017, 11:00	64.2
3	Near Reheating Furnace Area	12/05/2017, 11:25	71.5	13/05/2017, 11:20	67.5
4	WTP (Water Treatment Plant)	12/05/2017, 11:55	66.5	13/05/2017, 11:40	59.4
5	Boiler Area	12/05/2017, 12:05	67.2	13/05/2017, 12:00	61.6
6	Compressor Area	12/05/2017, 12:30	64.2	13/05/2017, 12:10	62.8

LIMIT*		
Table 2.3.1. Noise Limits for Various Working Environments		
Location / Activity	Equivalent level LAeq,8h	Maximum LA max, fast
Heavy industry (no demand for oral communication)	85 dB(A)	110 dB(A)
Light industry (decreasing demand for oral communication)	50-65 dB(A)	110 dB(A)
Open offices, control rooms, service counters or similar	45-50 dB(A)	...
Individual offices (no disturbing noise)	40-45 dB(A)	...
Classrooms, lecture halls	35-40 dB(A)	...
Hospitals	30-35 dB(A)	40 dB(A)

H.T. Shah
Lab ManagerDr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

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Head Office : 544, Belgium Tower, Ring Road, Opp. Linear Bus Stand, Surat-395003. (Guj.) Tele : (0261) 2455751, 2601224, 2601106
Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantijnath Sijk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-390507.
Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**TEST CERTIFICATE FOR NOISE MONITORING**

Customer's Name and Address :

QR/5.10/32C
Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No : **PL/LT 0076**Issue Date : **06/07/2017**Customer's Ref. : **W.O. No. FLS001.001
DTD 21.07.2016**Date of Sampling : **23/06/2017 & 24/06/2017**Sampling by : **Pollucon Laboratories Pvt. Ltd.**Sampling Location : **As per table**Test Method : **IS:11702**

Description of Instrument Used : **Sound Level Meter MAKE: LUTRON**
SR. NO 281323 MODEL: SL-4033SD
Calibration Date: 16.01.2017

RANGE: 35 dB & 130 dB
Due Date: 15.01.2018

RESULT TABLE

SR. NO.	NAME OF THE LOCATION	OBSERVATION			
		DAY TIME MONITORING		NIGHT TIME MONITORING	
		Date & Time (Hr.)	dB (A)	Date & Time (Hr.)	dB (A)
1	SMS Area Near Scrap Storage	23/06/2017, 10:47	56.4	24/06/2017, 21:05	54.3
2	Near V/D Moulding Area	23/06/2017, 10:50	60.3	24/06/2017, 21:35	57.1
3	Near Reheating Furnace Area	23/06/2017, 11:05	72.6	24/06/2017, 21:50	71.7
4	WTP (Water Treatment Plant)	23/06/2017, 11:15	65.5	24/06/2017, 22:10	62.9
5	Boiler Area	23/06/2017, 11:35	71.6	24/06/2017, 22:35	70.6
6	Compressor Area	23/06/2017, 12:05	69.1	24/06/2017, 22:55	68.8

LIMIT***Table 2.3.1. Noise Limits for Various Working Environments**

Location /activity	Equivalent level LAeq,8h	Maximum LA max, fast
Heavy Industry (no demand for oral communication)	85 dB(A)	110 dB(A)
Light Industry (decreasing demand for oral communication)	50-65 dB(A)	110 dB(A)
Open offices, control rooms, service counters or similar	45-50 dB(A)	--
Individual offices (no disturbing noise)	40-45 dB(A)	--
Classrooms, lecture halls	35-40 dB(A)	--
Hospitals	30-35 dB(A)	40 dB(A)

H.T. Shah
Lab Manager

Dr. Arun Bajpai
Lab Manager (Q)

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 Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantirath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-390500
 Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**TEST CERTIFICATE FOR NOISE MONITORING**

Customer's Name and Address :

QR/5.10/32C
Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE – 394510

Test Report No : **PL/LT 0088**
 Issue Date : **05/08/2017**
 Customer's Ref. : **W.O : FL5001153**
DTD:20.06.2017

Date of Sampling : **12/07/2017 & 13/07/2017**Sampling by : **Pollucon Laboratories Pvt. Ltd.**Sampling Location : **As per table**Test Method : **IS:11702**

Description of Instrument Used : **Sound Level Meter MAKE: LUTRON**
SR. NO 281323 MODEL: SL-4033SD
Calibration Date: 16.01.2017

RANGE: 35 dB & 130 dB
Due Date: 15.01.2018

RESULT TABLE

SR. NO.	NAME OF THE LOCATION	OBSERVATION			
		DAY TIME MONITORING		NIGHT TIME MONITORING	
		Date & Time (Hr.)	dB (A)	Date & Time (Hr.)	dB (A)
1	SMS Area Near Scrap Storage	12/07/2017, 10:45	55.7	13/07/2017, 21:00	53.9
2	Near V/D Moulding Area	12/07/2017, 10:58	60.1	13/07/2017, 21:12	56.6
3	Near Reheating Furnace Area	12/07/2017, 11:10	72.3	13/07/2017, 21:48	72.0
4	WTP (Water Treatment Plant)	12/07/2017, 11:35	65.8	13/07/2017, 22:01	63.2
5	Boiler Area	12/07/2017, 11:55	70.9	13/07/2017, 22:26	70.5
6	Compressor Area	12/07/2017, 12:10	68.6	13/07/2017, 22:53	69.1

LIMIT***Table 2.3.1. Noise Limits for Various Working Environments**

Location /activity	Equivalent level LAeq,8h	Maximum LA max, fast
Heavy Industry (no demand for oral communication)	85 dB(A)	110 dB(A)
Light Industry (decreasing demand for oral communication)	50-65 dB(A)	110 dB(A)
Open offices, control rooms, service counters or similar	45-50 dB(A)	--
Individual offices (no disturbing noise)	40-45 dB(A)	--
Classrooms, lecture halls	35-40 dB(A)	--
Hospitals	30-35 dB(A)	40 dB(A)

CC & A: AWH-87212 Issued Date: 20/07/2017 Valid up to: 22/05/2022

H.T. Shah
Lab Manager

Dr. Arun Bajpai
Lab Manager (Q)

● FSSAI Approved Lab ● Recognised by MoEF, New Delhi Under Sec. 12 of Environmental (Protection) Act-1986 ● GPCB approved ● ISO 14001:2004 ● OHSAS 18001:2007 ● ISO 9001:2008
 Note: This report is subject to terms & conditions mentioned overleaf schedule II auditor

Head Office : 544, Belgium Tower, Ring Road, Opp. Linear Bus Stand, Surat-395003. (Guj.) Tele : (0261) 2455751, 2601224, 2601106
 Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-390501
 Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**TEST CERTIFICATE FOR NOISE MONITORING**

Customer's Name and Address :

QR/5.10/32C
Page: 1 of 1

M/S. I & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No : **PL/LT 0099**
 Issue Date : **22/08/2017**
 Customer's Ref. : **W.O : FLS001153**
DTD:20.06.2017

Date of Sampling : **11/08/2017 & 12/08/2017**Sampling by : **Pollucon Laboratories Pvt. Ltd.**Sampling Location : **As per table**Test Method : **IS:11702**

Description of Instrument Used : **Sound Level Meter MAKE: LUTRON**
SR. NO 281323 MODEL: SL-4033SD
Calibration Date: 16.01.2017

RANGE: 35 dB & 130 dB
Due Date: 15.01.2018

RESULT TABLE

SR. NO.	NAME OF THE LOCATION	OBSERVATION			
		DAY TIME MONITORING		NIGHT TIME MONITORING	
		Date & Time (Hr.)	dB (A)	Date & Time (Hr.)	dB (A)
1	SMS Area Near Scrap Storage	11/08/2017, 10:30	58.6	12/08/2017, 21:15	52.8
2	Near V/D Moulding Area	11/08/2017, 10:40	62.3	12/08/2017, 21:30	55.7
3	Near Reheating Furnace Area	11/08/2017, 10:55	71.5	12/08/2017, 21:45	69.3
4	WTP (Water Treatment Plant)	11/08/2017, 11:05	66.9	12/08/2017, 22:05	61.2
5	Boiler Area	11/08/2017, 11:20	71.8	12/08/2017, 22:20	69.4
6	Compressor Area	11/08/2017, 12:35	67.3	12/08/2017, 22:45	68.1

LIMIT***Table 2.3.1. Noise Limits for Various Working Environments**

Location /activity	Equivalent level LAeq,8h	Maximum LA max, fast
Heavy Industry (no demand for oral communication)	85 dB(A)	110 dB(A)
Light Industry (decreasing demand for oral communication)	50-65 dB(A)	110 dB(A)
Open offices, control rooms, service counters or similar	45-50 dB(A)	--
Individual offices (no disturbing noise)	40-45 dB(A)	--
Classrooms, lecture halls	35-40 dB(A)	--
Hospitals	30-35 dB(A)	40 dB(A)

CC & A: AWH-87212 Issued Date: 20/07/2017 Valid up to: 22/05/2022

H.T. Shah
H.T. Shah
Lab Manager

Dr. Arun Bajpal
Dr. Arun Bajpal
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf



TEST CERTIFICATE FOR NOISE MONITORING

Customer's Name and Address :

QR/5.10/32C
Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No : **PL/LT 0106**
Issue Date : **29/09/2017**
Customer's Ref. : **W.O : FLS001153**
DTD:20.06.2017

Date of Sampling : **06/09/2017**
Sampling by : **Pollucon Laboratories Pvt. Ltd.**
Sampling Location : **As per table**
Test Method : **IS:11702**
Description of Instrument Used : **Sound Level Meter MAKE: LUTRON**
SR. NO 281323 MODEL: SL-4033SD
Calibration Date: 16.01.2017
RANGE: 35 dB & 130 dB
Due Date: 15.01.2018

RESULT TABLE

SR. NO.	NAME OF THE LOCATION	OBSERVATION			
		DAY TIME MONITORING		NIGHT TIME MONITORING	
		Date & Time (Hr.)	dB (A)	Date & Time (Hr.)	dB (A)
1	SMS Area Near Scrap Storage	06/09/2017, 10:35	59.6	07/09/2017, 21:20	50.7
2	Near V/D Moulding Area	06/09/2017, 10:45	63.1	07/09/2017, 21:45	52.8
3	Near Reheating Furnace Area	06/09/2017, 11:00	70.6	07/09/2017, 22:00	67.4
4	WTP (Water Treatment Plant)	06/09/2017, 11:10	68.2	07/09/2017, 22:10	59.3
5	Boiler Area	06/09/2017, 11:25	69.4	07/09/2017, 22:30	67.1
6	Compressor Area	06/09/2017, 11:40	66.5	07/09/2017, 22:50	66.6

LIMIT*

Table 2.3.1. Noise Limits for Various Working Environments

Location /activity	Equivalent level LAeq,8h	Maximum LA max, fast
Heavy Industry (no demand for oral communication)	85 dB(A)	110 dB(A)
Light Industry (decreasing demand for oral communication)	50-65 dB(A)	110 dB(A)
Open offices, control rooms, service counters or similar	45-50 dB(A)	--
Individual offices (no disturbing noise)	40-45 dB(A)	--
Classrooms, lecture halls	35-40 dB(A)	--
Hospitals	30-35 dB(A)	40 dB(A)

CC & A: AWH-87212 Issued Date: 20/07/2017 Valid up to: 22/05/2022

H.T. Shah
Lab Manager

Dr. Arun Bajpai
Lab Manager (Q)

SSAI Approved Lab • Recognised by MoEF, New Delhi Under Sec. 12 of Environmental Protection Act-1986 • GPCB approved & condition mentioned overleaf schedule II auditor • ISO 18001 : 2007 • ISO 9001 : 2008

Head Office : 544, Belgium Tower, Ring Road, Opp. Linear Bus Stand, Surat-395003. (Guj.) Tele : (0261) 2455751, 2601224, 2601106
Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-390507.
Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

Annexure 5:

Raw Effluent and Treated Effluent Analysis Reports

Treated Effluent (RO Permeate) Trend (Apr 17 to Sept 17)
(Quarterly/Monthly through M/s Pollucon Laboratory, MoEF Approved)

Parameters	Unit	Limit	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Average
Colour	Co-pt	100.0	10.0	20.0	10.0	15.0	10.0	11.0	12.7
pH	--	6.5-8.5	8.4	8.4	8.3	8.4	8.4	8.0	8.3
TSS	mg/L	100.0	14	16	52.0	24.0	16.0	30.0	25.3
TDS	mg/L	2100.0	44.0	62.0	46.0	40.0	37.0	36.0	44.2
Total Hardness as CaCO ₃	mg/L	NS	-	30.0	-	-	22.2	-	26.1
Chloride as Cl	mg/L	NS	10.0	15.0	10.0	5.0	9.0	11.0	10.0
Calcium as Ca	mg/L	NS	2.0	3.2	2.4	2.4	2.0	1.6	2.3
Magnesium as Mg	mg/L	NS	1.2	5.3	1.0	1.7	1.2	1.0	1.9
Oil & Grease	mg/L	10.0	BDL	BDL	BDL	BDL	BDL	BDL	ND
Phenolic Compound	mg/L	1.0	-	BDL	-	-	BDL	-	ND
Hexavalent Chromium, Cr ⁺⁶	mg/L	0.1	-	BDL	-	-	BDL	-	ND
Total Chromium, Cr ⁺³	mg/L	2.0	-	BDL	-	-	BDL	-	ND
Copper as Cu	mg/L	2.0	-	BDL	-	-	BDL	-	ND
Zinc as Zn	mg/L	5.0	-	BDL	-	-	BDL	-	ND
Iron as Fe	mg/L	NS	BDL	0.015	0.68	0.42	0.012	0.42	0.3
Nicle as Ni	mg/L	2.0	-	0.1	-	-	0.1	-	0.1
Sulphate as SO ₄	mg/L	NS	2.1	3.4	3.4	2.4	2.6	1.1	2.5
Cyanide as CN	mg/L	0.2	-	BDL	-	-	BDL	-	ND
Silica as SiO ₂	mg/L	NS	4.3	4.8	6.5	3.2	3.6	2.4	4.1
Fluoride as F	mg/L	1.0	-	BDL	-	-	BDL	-	ND
COD	mg/L	100.0	BDL	28	34	24	26	28	30.3
BOD	mg/L	30.0	BDL	BDL	8	6	7.4	9	8.0
Sulphide as S	mg/L	2.0	-	BDL	-	-	BDL	-	ND
Ammonical Nitrogen as NH ₃	mg/L	50.0	BDL	BDL	0.96	0.52	BDL	0.98	0.8
Temprature	°C	40.0	29.0	32.0	29.0	27.0	30.0	30.0	29.5
Nitrate Nitrogen as NO ₃	mg/L	NS	BDL	BDL	0.18	0.24	BDL	0.14	0.4
Sodium as Na	%	60.0	57.69	28.8	57.4	55.5	50.0	52.9	50.4
Mercury as Hg	mg/L	0.01	-	BDL	-	-	BDL	-	ND



POLLUCON LABORATORIES PVT. LTD.

TEST CERTIFICATE FOR RO REJECT WATER

Customer's Name and Address :

QR/5.16/32

Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : PL/LT 0049

Issue Date : 01/05/2017

Customer's Ref. : W.D. No. FLS001801
DTD: 21.07.2016

Description of Sample	: Water Sample	Quantity/No. of Samples	: 05 Lit/One
Date of Sampling	: 22/04/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 22/04/2017	Lab ID	: LT/1704/10
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 22/04/2017	Date of Completion of Test	: 01/05/2017

TEST RESULT

SR. NO.	TEST PARAMETERS	UNIT	RESULT	TEST METHOD
			RO REJECT WTP 12	
1.	Colour	Co-pt	30	IS3025(P-4)83Re.02
2.	pH	-	7.78	IS3025(P-11)83Re.02
3.	Total Suspended Solids	mg/L	84	IS3025(P-17)84Re.02
4.	Total Dissolved Solids	mg/L	1281	IS3025(P-16)84Re.02
5.	Chloride as Cl	mg/L	319	IS3025(P-33)88Re.92 Argentometric method
6.	Calcium as Ca	mg/L	92	IS3025(P-40)91Re.03 EDTA Titrimetric method
7.	Magnesium as Mg	mg/L	80.64	IS3025(P-46)94Re.00 EDTA method
8.	Oil & Grease	mg/L	BDL*	APHA(22)* Ed/5520 D
9.	Iron as Fe	mg/L	0.002	AAS APHA(22)* Ed/3111 B
10.	Sulphate as SO ₄	mg/L	210	APHA(22)* Ed/1500 SO ₄ E Turbidimetric method
11.	Silica as SiO ₂	mg/L	80.31	APHA(22)* Ed/4500 Si C
12.	COD	mg/L	72	APHA(22)* Ed/5520-D OPEN REFLUX
13.	BOD (3 Days @ 27 °C)	mg/L	18	IS 3025 (P-44)
14.	Ammonical Nitrogen as NH ₃	mg/L	0.896	IS-3025-(P-34)
15.	Temperature	°C	32	IS-3025-(P-9)
16.	Nitrate Nitrogen as NO ₃	mg/L	0.24	IS3025(P-34)88 Chromotropic Acid Method
17.	Sodium as Na	%	39.70	AAS APHA (22)* Ed/3500 Na.B

*BDL: Below Detection Limit, Minimum Detection Limit: Oil & Grease: 1.5 mg/L, Ammonical Nitrogen: 0.05 mg/L

H. T. Shah
Lab Manager

Dr. Arun Bajpai

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Sec. 12 of Environmental (Protection) Act-1986

• CPCB approved schedule II auditor • ISO 14001 : 2004 • ISO 9001 : 2008

Head Office : 544, Belgium Town, Gandhinagar, Opp. Laxmi Bus Stand, Surat-395003 (G)
Branch Office : Plot No. 5/5, Pollucon House, Opp. Balaji Industrial Soc., Old Shanlinathi Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-3905007
Tels : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com



QR75,10/32
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M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : PL/LT-0047
Issue Date : 01/05/2017
Customer's Ref. : W.D. No. FL5051091
OTS 21.07.2016

Description of Sample	: Water Sample	Quantity/No. of Samples	: 05 Lit/One
Date of Sampling	: 22/04/2017	Sampling Procedure	: Grab
Sampling By	: Pollution Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 22/04/2017	Lab ID	: LT/1704/08
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 22/04/2017	Date of Completion of Test	: 01/05/2017

SR. NO	TEST PARAMETERS	UNIT	RESULT	TEST METHOD
			RAW EFFLUENT (CTBD TANK) WTP 06	
1.	pH	—	9.60	IS3025(P-11)83Re.02
2.	Total Suspended Solids	mg/L	10	IS3025(P-17)84Re.02
3.	Total Dissolved Solids	mg/L	48	IS3025(P-16)84Re.02
4.	Total Hardness as CaCO ₃	mg/L	10	IS3025(P-21)84EDTARe.02
5.	Alkalinity	mg/L	20	IS3025(P-23)86Re.03
6.	Chloride as Cl	mg/L	14.49	IS3025(P-32)08Re.99 Argentometric method
7.	Calcium as Ca	mg/L	2.0	IS3025(P-40)91Re.03 EDTA Titrimetric method
8.	Magnesium as Mg	mg/L	1.2	IS3025(P-40)94Re.99 EDTA method
9.	Oil & Grease	mg/L	BDL*	APHA(22 nd Ed)5520 D
10.	Iron as Fe	mg/L	0.012	AAS APHA(22 nd Ed)3111 B
11.	Sulphate as SO ₄	mg/L	1.40	APHA(22 nd Ed)4500 SO ₄ E Turbidimetric method
12.	Silica as SiO ₂	mg/L	2.42	APHA(22 nd Ed)4500-Si C
13.	COD	mg/L	8.0	APHA(22 nd Ed) 5520-D OPEN REFLEX
14.	BOD (3 Days @ 27 °C)	mg/L	BDL*	IS 3025 (P-44)

BDL*: Below Detection Limit. Minimum Detectable Concentration

BDL*: Below Detection Limit; Minimum Detection Limit: Oil & Grease: 1.0 mg/L

H. T. Shah

Er. Arun Bajpai

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Head Office : 544, Belgium Tower, Ring Road, Opp. Jangasub, Dhami, Surat-395003 (Guj.) Tel: (0261) 2455751, 2601224, 2601106
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Tel: (0261) 2635750, 2635751 E-mail : pollucon@gmail.com; Website : www.polluconlab.com



POLLUCON LABORATORIES PVT. LTD.

TEST CERTIFICATE FOR TREATED EFFLUENT WATER

Customer's Name and Address :

QK/5.10/32

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M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : PL/LT 0948

Issue Date : 01/05/2017

Customer's Ref. : W.D. No. PL5004901
Dtd. 21.07.2016

Description of Sample : Water Sample Quantity/No. of Samples : 05 Lit/One
Date of Sampling : 22/04/2017 Sampling Procedure : Grab
Sampling By : Pollucon Laboratories Pvt. Ltd. Protocol (purpose) : QC
Sample Receipt Date : 22/04/2017 Lab ID : LT/1704/09
Packing/ Seal : Sealed Test Parameters : As per table
Date of Starting of Test : 22/04/2017 Date of Completion of Test : 01/05/2017

TEST RESULT

SR. NO.	TEST PARAMETERS	UNIT	RESULT	GPCB LIMIT	TEST METHOD
			TREATED EFFLUENT (RO PERMEATE) WTP 05		
1.	Colour	Co-pt	50	100 Co-pt	IS3025(P-4)83Re.02
2.	pH	-	6.41	6.5 to 8.5	IS3025(P-11)83Re.02
3.	Total Suspended Solids	mg/L	20	100 mg/L	IS3025(P-17)84Re.02
4.	Total Dissolved Solids	mg/L	651	2100 mg/L	IS3025(P-16)84Re.02
5.	Chloride as Cl ⁻	mg/L	155	NS*	IS3025(P-33)88Re.05 Argentometric method
6.	Calcium as Ca	mg/L	4.8	NS*	IS3025(P-10)91Re.03 EDTA Titrimetric method
7.	Magnesium as Mg	mg/L	51.84	NS*	IS3025(P-45)94Re.09 EDTA method
8.	Oil & Grease	mg/L	BDL*	10 mg/L	APHA(22 nd Ed)5520 D
9.	Sulphate as SO ₄	mg/L	41.36	NS*	APHA(22 nd Ed)4500 SO ₄ E Turkometric method
10.	Silica as SiO ₂	mg/L	4.8	NS*	APHA(22 nd Ed)4500 SI C
11.	COD	mg/L	20	100 mg/L	APHA(22 nd Ed)5520 D OPEN REFLUX
12.	BOD (3 Days @ 27 °C)	mg/L	8.0	30 mg/L	IS 3025 (P-44)
13.	Ammonical Nitrogen as NH ₃	mg/L	1.28	50 mg/L	IS-3025-(P-34)
14.	Temperature	°C	30	40 °C	IS-3025(P-9)
15.	Iron as Fe	mg/L	0.24	1 mg/L	AAS APHA(22 nd Ed)3111 B
16.	Nitrate Nitrogen as NO ₃	mg/L	0.20	NS*	IS3025(P-34)98 Chromotropic Acid Method
17.	Sodium as Na	%	47.89	60	AAS APHA (22 nd Ed)3550 Na C

BDL*: Below Detection Limit, Minimum Detection Limit: Oil & Grease: 1.0 mg/L, Ammonical Nitrogen: 0.05 mg/L, Nitrate Nitrogen: 0.15 mg/L.
NS*: Not specified #Details given by client.

H. T. Shah

Lab Manager

Dr. Arun Bajpai

Lab Manager

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Tel: (0261) 2635750, 2635751 E-mail: pollucon@gmail.com, Website: www.polluconlab.com

**POLLUCON LABORATORIES PVT. LTD.****TEST CERTIFICATE FOR RAW WATER**

QR/5.10/32

Page: 1 of 1

Customer's Name and Address :

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA, PIN CODE - 394510

Test Report No. : PL/LT.0059

Issue Date : 20/05/2017

Customer's Ref. : W.Q. No. FL5001001
DTD 21.07.2016

Description of Sample	: Water Sample	Quantity/No. of Samples	: 05 Lit/One
Date of Sampling	: 13/05/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 15/05/2017	Lab ID	: LT/1705/14
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 15/05/2017	Date of Completion of Test	: 20/05/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	TEST METHOD
			RAW WATER WTP 01	
1.	pH	-	7.69	IS3025(P-11)83Re.02
2.	Turbidity	NTU	3.12	APHA 2130-B
3.	Electric Conductivity	µmho/cm	427	APHA 2510
4.	Total Suspended Solids	mg/L	30	IS3025(P-17)84Re.02
5.	Total Dissolved Solids	mg/L	229	IS3025(P-16)84Re.02
6.	Total Hardness as CaCO ₃	mg/L	128	IS3025(P-21)84EDTARE.02
7.	Residual Chlorine	mg/L	< 0.1	APHA(22 nd Edi)4500 Cl G-DPD Colorimetric method
8.	Dissolved Oxygen	mg/L	5.4	IS3025(P-38)89Re.99Titrimetric method
9.	Calcium as Ca	mg/L	23.2	IS3025(P-40)91Re.03EDTA Titrimetric method
10.	Magnesium as Mg	mg/L	16.8	IS3025(P-46)94Re.99EDTA method
11.	Silica as SiO ₂	mg/L	6.02	APHA(22 nd Edi)4500 Si C
12.	Fluoride as F	mg/L	BDL*	APHA(22 nd Edi) 4500 F D SPANDS Method
13.	Ammonical Nitrogen as NH ₃	mg/L	1.8	IS-3025-(P-34)
14.	Temperature	°C	30	IS-3025(P-9)
15.	Nitrate Nitrogen as NO ₃	mg/L	0.26	IS3025(P-34)88Chromotropic Acid Method
16.	Total Alkalinity	mg/L	148	IS3025(P-23)86Re.03
17.	Sulphate as SO ₄	mg/L	23.6	APHA(22 nd Edi)4500 SO ₄ E
18.	Chloride as Cl	mg/L	32.49	IS3025(P32)88Re.99
19.	Iron as Fe	mg/L	0.014	AAS APHA(22 nd Edi)3111 B

BDL*: Below Detection Limit, Minimum Detection Limit: Fluoride as F: 0.01 mg/L

H. T. Shah

Lab Manager

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 Sec. 12 of Environmental Protection Act-1986

• GPCB approved
 schedule II auditor

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Dr. Arun Bajpai

Lab Manager (Q)

Head Office : 544, Belgium Tower, Near The Republic of India, Sector-10, Gurgaon, Haryana-122002
 Phone : 0124-2635751, 2601224, 2601108

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**POLLUCON LABORATORIES PVT. LTD.****TEST CERTIFICATE FOR RAW EFFLUENT WATER**

QR/5.10/32

Page: 1 of 1

Customer's Name and Address :

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : PL/LT 0058

Issue Date : 20/05/2017

Customer's Ref. : W.O. No. FL5001001
DTD 21.07.2016

Description of Sample	: Water Sample	Quantity/No. of Samples	: 05 Lit/One
Date of Sampling	: 13/05/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 15/05/2017	Lab ID	: LT/1705/13
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 15/05/2017	Date of Completion of Test	: 20/05/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	TEST METHOD
			RAW EFFLUENT (CTBD TANK) WTP-06	
1.	pH	-	8.66	IS3025(P-11)83Re.02
2.	Total Suspended Solids	mg/L	66	IS3025(P-17)84Re.02
3.	Total Dissolved Solids	mg/L	619	IS3025(P-16)84Re.02
4.	Total Hardness as CaCO ₃	mg/L	276	IS3025(P-21)84EDTARe.02
5.	Alkalinity	mg/L	21.2	IS3025(P-23)86Re.03
6.	Chloride as Cl	mg/L	119	IS3025(P-32)88Re.99 Argentometric method
7.	Calcium as Ca	mg/L	21.6	IS3025(P-40)91Re.03 EDTA Titrimetric method
8.	Magnesium as-Mg	mg/L	53.28	IS3025(P-46)94Re.99 EDTA method
9.	Oil & Grease	mg/L	BDL*	APHA(22 nd Ed)5520 D
10.	Iron as Fe	mg/L	0.59	AAS APHA(22 nd Ed)3111 B
11.	Sulphate as SO ₄	mg/L	47.36	APHA(22 nd Ed)4500 SO ₄ E Turbidimetric method
12.	Silica as SiO ₂	mg/L	18.49	APHA(22 nd Ed)4500 Si C
13.	COD	mg/L	96	APHA(22 nd Ed) 5520-B OPEN REFLUX
14.	BOD (3 Days @ 27 °C)	mg/L	24	IS 3025 (P-44)

BDL*: Below Detection Limit, Minimum Detection Limit: Oil & Grease: 1.0 mg/L

H. T. Shah

Lab Manager

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Dr. Arun Bajpai

Lab Manager (Q)

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Tel: (0261) 2635750, 2635751 E-mail: pollucon@gmail.com, Website: www.polluconlab.com

**POLLUCON** LABORATORIES PVT. LTD.**TEST CERTIFICATE FOR TREATED EFFLUENT WATER**

QR/5.10/32

Page: 1 of 1

Customer's Name and Address :

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : **PL/LT 0060**Issue Date : **20/05/2017**Customer's Ref. : **W.O. No. FLS001001
DTD: 21.07.2016**

Description of Sample	: Water Sample	Quantity/No. of Samples	: 05 Lit/One
Date of Sampling	: 13/05/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 15/05/2017	Lab ID	: LT/1705/15
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 15/05/2017	Date of Completion of Test	: 20/05/2017

TEST RESULT

SR. NO.	TEST PARAMETERS	UNIT	RESULT	GPCB LIMIT*	TEST METHOD
			TREATED EFFLUENT (RO PERMEATE) WTP 05		
1.	Colour	Co-pt	10	100 Co-pt	IS3025(P-4)83Re.02
2.	pH		8.48	6.5 to 8.5	IS3025(P-11)83Re.02
3.	Total Suspended Solids	mg/L	32	100 mg/L	IS3025(P-17)84Re.02
4.	Total Dissolved Solids	mg/L	50	2100 mg/L	IS3025(P-16)84Re.02
5.	Chloride as Cl	mg/L	12.49	NS*	IS3025(P-32)88Re.99 Argentometric method
6.	Calcium as Ca	mg/L	0.28	NS*	IS3025(P-40)91Re.03 EDTA Titrimetric method
7.	Magnesium as Mg	mg/L	0.96	NS*	IS3025(P-46)94Re.99 EDTA method
8.	Oil & Grease	mg/L	BDL*	10 mg/L	APHA(22 nd Edi)5520 D
9.	Sulphate as SO ₄	mg/L	2.76	NS*	APHA(22 nd Edi)4500 SO ₄ E Turbidimetric method
10.	Silica as SiO ₂	mg/L	2.04	NS*	APHA(22 nd Edi)4500 Si C
11.	COD	mg/L	22	100 mg/L	APHA(22 nd Edi) 5520-D OPEN REFLUX
12.	BOD (3 Days @ 27 °C)	mg/L	7	30 mg/L	IS 3025 (P-44)
13.	Ammonical Nitrogen as NH ₃	mg/L	10.70	50 mg/L	IS-3025-(P-34)
14.	Temperature	°C	30	40 °C	IS-3025(P-9)
15.	Iron as Fe	mg/L	0.16	1 mg/L	AAS APHA(22 nd Edi)3111-B
16.	Nitrate Nitrogen as NO ₃	mg/L	0.87	NS*	IS3025(P-34)98 Chromotropic Acid Method
17.	Sodium as Na	%	56.4	60	AAS APHA (22 nd Edi)3500 Na B

BDL*: Below Detection Limit, Minimum Detection Limit: Oil & Grease: 1.0 mg/L, Ammonical Nitrogen: 0.05 mg/L, Nitrate Nitrogen: 0.15 mg/L

NS*: Not specified #Details given by client.

H. T. Shah

Lab Manager

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Dr. Arun Bajpai

Lab Manager (Q)

Head Office : 544, Belgium Tower, Plot No. 5/6, Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navivan Circle, Udhana Magdalla Road, Surat-390507.

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Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**POLLUCON LABORATORIES PVT. LTD.****TEST CERTIFICATE FOR RO REJECT WATER**

QR/S.10/32

Page: 1 of 1

Customer's Name and Address :

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : **PL/LT 0061**Issue Date : **20/05/2017**Customer's Ref. : **W.O. No. FL5001001
DTD. 21.07.2016**

Description of Sample	: Water Sample	Quantity/No. of Samples	: 05 Lit/One
Date of Sampling	: 13/05/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 15/05/2017	Lab ID	: LT/1705/16
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 15/05/2017	Date of Completion of Test	: 20/05/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	TEST METHOD
			RO REJECT WTP 12	
1.	Colour	Co-pt	20	IS3025(P-4)83Re.02
2.	pH	---	7.73	IS3025(P-11)83Re.02
3.	Total Suspended Solids	mg/L	66	IS3025(P-17)84Re.02
4.	Total Dissolved Solids	mg/L	1281	IS3025(P-16)84Re.02
5.	Chloride as Cl	mg/L	300	IS3025(P-32)88Re.99 Argentometric method
6.	Calcium as Ca	mg/L	93	IS3025(P-40)91Re.03 EDTA Titrimetric method
7.	Magnesium as Mg	mg/L	75	IS3025(P-46)94Re.99 EDTA method
8.	Oil & Grease	mg/L	BDL*	APHA(22 nd Edi)5520 D
9.	Iron as Fe	mg/L	BDL*	AAS APHA(22 nd Edi)3111 B
10.	Sulphate as SO ₄	mg/L	23.9	APHA(22 nd Edi)4500 SO ₄ E Turbidimetric method
11.	Silica as SiO ₂	mg/L	100	APHA(22 nd Edi)4500 SI C
12.	COD	mg/L	52	APHA(22 nd Edi) 5520-D OPEN REFLEX
13.	BOD (3 Days @ 27 °C)	mg/L	14	IS 3025 (P-44)
14.	Ammonical Nitrogen as NH ₃	mg/L	2.3	IS-3025 (P-34)
15.	Temperature	°C	29	IS-3025(P-9)
16.	Nitrate-Nitrogen as NO ₃	mg/L	0.93	IS3025(P-34)85 Chromotropic Acid Method
17.	Sodium as Na	%	35.33	AAS APHA (22 nd Edi.)3500 Na B

BDL*: Below Detection Limit, Minimum Detection Limit; Oil & Grease: 1.0 mg/L, Ammonical Nitrogen: 0.05 mg/L

H. T. Shah

Lab Manager

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• ISO 14001: 2004
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Dr. Arun Bajpai

Lab Manager (Q)

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Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**POLLUCON** LABORATORIES PVT. LTD.**TEST CERTIFICATE FOR RAW EFFLUENT WATER**

Customer's Name and Address :

QR/5.10/32

Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : **PL/LT 0072**Issue Date : **06/07/2017**Customer's Ref. : **W.O. No. FLS001001
DTD 21.07.2016**

Description of Sample	: Water Sample	Quantity/No. of Samples	: 05 Lit/One
Date of Sampling	: 24/06/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 26/06/2017	Lab ID	: LT/1706/13
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 26/06/2017	Date of Completion of Test	: 01/07/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	TEST METHOD
			RAW EFFLUENT (CTBD TANK) WTP 06	
1.	pH	--	8.93	IS3025(P-11)83Re.02
2.	Total Suspended Solids	mg/L	60	IS3025(P-17)84Re.02
3.	Total Dissolved Solids	mg/L	829	IS3025(P-16)84Re.02
4.	Total Hardness as CaCO ₃	mg/L	328	IS3025(P-21)84EDTARe.02
5.	Alkalinity	mg/L	192	IS3025(P-23)86Re.03
6.	Chloride as Cl	mg/L	149	IS3025(P-32)88Re.99 Argentometric method
7.	Calcium as Ca	mg/L	32.0	IS3025(P-40)91Re.03 EDTA Titrimetric method
8.	Magnesium as Mg	mg/L	59.52	IS3025(P-46)94Re.99 EDTA method
9.	Oil & Grease	mg/L	0.70	APHA(22 nd Edi)5520 D
10.	Iron as Fe	mg/L	0.58	AAS APHA(22 nd Edi)3111 B
11.	Sulphate as SO ₄	mg/L	65.2	APHA(22 nd Edi)4500 SO ₄ E Turbidimetric method
12.	Silica as SiO ₂	mg/L	18.76	APHA(22 nd Edi)4500 Si C
13.	COD	mg/L	82	APHA(22 nd Edi) 5520-D OPEN REFLUX
14.	BOD (3 Days @ 27 °C)	mg/L	30	IS 3025 (P-44)

BPL*: Below Detection Limit, Minimum Detection Limit: Oil & Grease: 1.0 mg/L

H. T. Shah
Lab Manager

Dr. Arun Bajpai
Lab Manager (Q)

• FSSAI Approved Lab • Recognised by MoEF, New Delhi Under
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• GPCB approved
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Head Office : 544, Belgium Tower, Ring Road, Plot No. 5/6, Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-390500

Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-390500

Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**POLLUCON** LABORATORIES PVT. LTD.**TEST CERTIFICATE FOR RAW EFFLUENT WATER**

Customer's Name and Address :

QR/5.10/32

Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : **PL/LT-0073**Issue Date : **06/07/2017**Customer's Ref. : **W.O. No. FL5001001
DTD 21.07.2016**

Description of Sample	: Water Sample	Quantity/No. of Samples	: 05 Lit/One
Date of Sampling	: 24/06/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 26/06/2017	Lab ID	: LT/1706/14
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 26/06/2017	Date of Completion of Test	: 01/07/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	TEST METHOD
			RAW WATER WTP 01	
1.	pH	---	8.72	IS3025(P-11)83Re.02
2.	Turbidity	NTU	3.58	APHA 2130-B
3.	Electric Conductivity	µmho/cm	386	APHA 2510
4.	Total Suspended Solids	mg/L	32	IS3025(P-17)84Re.02
5.	Total Dissolved Solids	mg/L	212	IS3025(P-16)84Re.02
6.	Total Hardness as CaCO ₃	mg/L	134	IS3025(P-21)84EDTARe.02
7.	Residual Chlorine	mg/L	< 0.1	APHA(22 nd Edi)4500 Cl G-DPD Colorimetric method
8.	Dissolved Oxygen	mg/L	5.6	IS3025(P-38)89Re.99Titrimetric method
9.	Calcium as Ca	mg/L	24.80	IS3025(P-40)91Re.03EDTA Titrimetric method
10.	Magnesium as Mg	mg/L	17.28	IS3025(P-46)94Re.99EDTA method
11.	Silica as SiO ₂	mg/L	5.46	APHA(22 nd Edi)4500 Si C
12.	Fluoride as F	mg/L	BDL*	APHA(22 nd Edi) 4500 F D SPANDS Method
13.	Ammonical Nitrogen as NH ₃	mg/L	1.92	IS-3025-(P-34)
14.	Temperature	°C	29	IS-3025(P-9)
15.	Nitrate Nitrogen as NO ₃	mg/L	0.58	IS3025(P-34)88Chromotropic Acid Method
16.	Total Alkalinity	mg/L	122	IS3025(P-23)86Re.03
17.	Sulphate as SO ₄	mg/L	22.60	APHA(22 nd Edi)4500 SO ₄ E
18.	Chloride as Cl	mg/L	38.49	IS3025(P32)88Re.99
19.	Iron as Fe	mg/L	0.013	AAS APHA(22 nd Edi)3111 B

BDL*: Below Detection Limit, Minimum Detection Limit: Fluoride as F: 0.01 mg/L

H. T. Shah
Lab Manager

Dr. Arun Bajpai
Lab Manager (Q)

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 Sec. 12 of Environmental (Protection) Act-1986

• GPCB approved
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• ISO 14001 : 2004 • ISO 9001 : 2008

Head Office : 544, Belgium Tower, New Road, Port Ismail, Bus Station, Surat-395003 (Guj) Tel: (0261) 2635751, 2601224, 2601106

Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-390500

Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**POLLUCON** LABORATORIES PVT. LTD.**TEST CERTIFICATE FOR RAW EFFLUENT WATER**

Customer's Name and Address :

QR/5.10/32

Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : **PL/LT 0074**Issue Date : **06/07/2017**Customer's Ref. : **W.O. No. FLS001001
DTD 21.07.2016**

Description of Sample	: Water Sample	Quantity/No. of Samples	: 05 Lit/One
Date of Sampling	: 24/06/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 26/06/2017	Lab ID	: LT/1706/15
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 26/06/2017	Date of Completion of Test	: 01/07/2017

TEST RESULT

SR. NO.	TEST PARAMETERS	UNIT	RESULT	GPCB LIMIT#	TEST METHOD
			TREATED EFFLUENT (RO PERMEATE) WTP 05		
1.	Colour	Co-pt	20	100 Co-pt	IS3025(P-4)83Re.02
2.	pH	--	9.28	6.5 to 8.5	IS3025(P-11)83Re.02
3.	Total Suspended Solids	mg/L	34	100 mg/L	IS3025(P-17)84Re.02
4.	Total Dissolved Solids	mg/L	47	2100 mg/L	IS3025(P-16)84Re.02
5.	Chloride as Cl	mg/L	9.99	NS*	IS3025(P-32)88Re.99 Argentometric method
6.	Calcium as Ca	mg/L	2.4	NS*	IS3025(P-40)91Re.03 EDTA Titrimetric method
7.	Magnesium as Mg	mg/L	1.2	NS*	IS3025(P-46)94Re.99 EDTA method
8.	Oil & Grease	mg/L	BDL*	10 mg/L	APHA(22 nd Ed)5520 D
9.	Sulphate as SO ₄	mg/L	2.03	NS*	APHA(22 nd Ed)4500 SO ₄ E Turbidimetric method
10.	Silica as SiO ₂	mg/L	3.06	NS*	APHA(22 nd Ed)4500 Si-C
11.	COD	mg/L	26	100 mg/L	APHA(22 nd Ed) 5520-D OPEN REFLUX
12.	BOD (3 Days @ 27°C)	mg/L	8	30 mg/L	IS 3025 (P-44)
13.	Ammonical Nitrogen as NH ₃	mg/L	6.79	50 mg/L	IS-3025-(P-34)
14.	Temperature	°C	28	40 °C	IS-3025(P-9)
15.	Iron as Fe	mg/L	0.35	1 mg/L	AAS APHA(22 nd Ed)3111 B
16.	Nitrate Nitrogen as NO ₃	mg/L	0.38	NS*	IS3025(P-34)88 Chromotropic Acid Method
17.	Sodium as Na	%	59.40	60	AAS APHA (22 nd Ed.)3500 Na B

BDL*: Below Detection Limit; Minimum Detection Limit; Oil & Grease: 1.0 mg/L, Ammonical Nitrogen: 0.05 mg/L, Nitrate Nitrogen: 0.15 mg/L
 NS*: Not specified #Details given by client.

H. T. Shah**Lab Manager****Dr. Arun Bajpai****Lab Manager (Q)**

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 Sec. 12 of Environmental (Protection) Act-1986

● GPCB approved
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● ISO 14001 : 2004 ● ISO 9001 : 2008

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**TEST CERTIFICATE FOR RAW EFFLUENT WATER**

Customer's Name and Address :

QR/5.10/32
Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : **PL/LT 0075**
 Issue Date : **06/07/2017**
 Customer's Ref. : **W.O. No. FLS002001**
DTD 21.07.2016

Description of Sample	: Water Sample	Quantity/No. of Samples	: 05 Lit/One
Date of Sampling	: 24/06/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 26/06/2017	Lab ID	: LT/1706/16
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 26/06/2017	Date of Completion of Test	: 01/07/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	TEST METHOD
			RO REJECT WTP 12	
1.	Colour	Co-pt	20	IS3025(P-4)83Re.02
2.	pH	--	7.92	IS3025(P-11)83Re.02
3.	Total Suspended Solids	mg/L	5	IS3025(P-17)84Re.02
4.	Total Dissolved Solids	mg/L	1428	IS3025(P-16)84Re.02
5.	Chloride as Cl	mg/L	356	IS3025(P-32)88Re.99 Argentometric method
6.	Calcium as Ca	mg/L	116	IS3025(P-40)91Re.03 EDTA Titrimetric method
7.	Magnesium as Mg	mg/L	88.08	IS3025(P-46)94Re.99 EDTA method
8.	Oil & Grease	mg/L	BDL*	APHA(22 nd Edi)5520 D
9.	Iron as Fe	mg/L	0.018	AAS APHA(22 nd Edi)3111 B
10.	Sulphate as SO ₄	mg/L	84	APHA(22 nd Edi)4500 SO ₄ E Turbidimetric method
11.	Silica as SiO ₂	mg/L	51.98	APHA(22 nd Edi)4500 SI C
12.	COD	mg/L	86	APHA(22 nd Edi) 5520-D OPEN REFLUX
13.	BOD (3 Days @ 27 °C)	mg/L	20	IS 3025 (P-44)
14.	Ammonical Nitrogen as NH ₃	mg/L	2	IS-3025-(P-34)
15.	Temperature	°C	29	IS-3025(P-9)
16.	Nitrate Nitrogen as NO ₃	mg/L	1.82	IS3025(P-34)88 Chromotropic Acid Method
17.	Sodium as Na	%	38.11	AAS APHA (22 nd Edi.)3500 Na B

BDL*: Below Detection Limit, Minimum Detection Limit: Oil & Grease: 1.0 mg/L, Ammonical Nitrogen: 0.05 mg/

H. T. Shah
Lab Manager

Dr. Arun Bajpai
Lab Manager (O)

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 Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

TEST CERTIFICATE FOR RAW EFFLUENT WATER

QR/5.10/32
Page: 1 of 1

Customer's Name and Address :

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD. HAZIRA MANUFACTURING COMPLEX, POST: BHATHA, DIST: SURAT, GUJARAT, INDIA. PIN CODE – 394510	Test Report No. : PL/LT 0087 Issue Date : 05/08/2017 Customer's Ref. : W.O : FLS001153 DTD:20.06.2017
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Description of Sample	: Water Sample	Quantity/No. of Samples	: 02 Lit/One
Date of Sampling	: 12/07/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 13/07/2017	Lab ID	: LT/1707/14
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 13/07/2017	Date of Completion of Test	: 24/07/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	TEST METHOD
			RO REJECT WTP 12	
1.	Colour	Co-pt	30	IS3025(P-4)83Re.02
2.	pH	--	8.13	IS3025(P-11)83Re.02
3.	Total Suspended Solids	mg/L	52	IS3025(P-17)84Re.02
4.	Total Dissolved Solids	mg/L	1118	IS3025(P-16)84Re.02
5.	Chloride as Cl	mg/L	348	IS3025(P-32)88Re.99 Argentometric method
6.	Calcium as Ca	mg/L	92	IS3025(P-40)91Re.03 EDTA Titrimetric method
7.	Magnesium as Mg	mg/L	62	IS3025(P-46)94Re.99 EDTA method
8.	Oil & Grease	mg/L	BDL*	APHA(22 nd Edi)5520 D
9.	Iron as Fe	mg/L	0.011	AAS APHA(22 nd Edi)3111 B
10.	Sulphate as SO ₄	mg/L	56	APHA(22 nd Edi)4500 SO ₄ E Turbidimetric method
11.	Silica as SiO ₂	mg/L	28	APHA(22 nd Edi)4500 SI C
12.	COD	mg/L	90	APHA(22 nd Edi) 5520-D OPEN REFLUX
13.	BOD (3 Days @ 27 °C)	mg/L	22	IS 3025 (P-44)
14.	Ammonical Nitrogen as NH ₃	mg/L	2.2	IS-3025-(P-34)
15.	Temperature	°C	29	IS-3025(P-9)
16.	Nitrate Nitrogen as NO ₃	mg/L	0.013	IS3025(P-34)88 Chromotropic Acid Method
17.	Sodium as Na	%	46.67	AAS APHA (22 nd Edi.)3500 Na B

BDL*: Below Detection Limit, Minimum Detection Limit: Oil & Grease: 1.0 mg/L, Ammonical Nitrogen: 0.05 mg/

H. T. Shah
Lab Manager

Dr. Arun Bajpai
Lab Manager (Q)

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Head Office : 544, Belgium Tower, Ring Road, Opp. Linear Bus Stand, Surat-395005, (Guj.) Tele : (0261) 2435751, 2601224, 2601106
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 Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**POLLUCON LABORATORIES PVT. LTD.****TEST CERTIFICATE FOR RAW EFFLUENT WATER**

Customer's Name and Address :

QR/5.10/32

Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : **PL/LT 0086**Issue Date : **05/08/2017**Customer's Ref. : **W.O : FL5001153**
DTD:20.06.2017

Description of Sample : **Water Sample** Quantity/No. of Samples : **02 Lit/One**
Date of Sampling : **12/07/2017** Sampling Procedure : **Grab**
Sampling By : **Pollucon Laboratories Pvt. Ltd.** Protocol (purpose) : **QC**
Sample Receipt Date : **13/07/2017** Lab ID : **LT/1707/13**
Packing/ Seal : **Sealed** Test Parameters : **As per table**
Date of Starting of Test : **13/07/2017** Date of Completion of Test : **24/07/2017**

TEST RESULT

SR. NO.	TEST PARAMETERS	UNIT	RESULT	GPCB LIMIT#	TEST METHOD
			TREATED EFFLUENT (RO PERMEATE) WTP 05		
1.	Colour	Co-pt	10	100 Co-pt	IS3025(P-4)83Re.02
2.	pH	--	8.33	6.5 to 8.5	IS3025(P-11)83Re.02
3.	Total Suspended Solids	mg/L	38	100 mg/L	IS3025(P-17)84Re.02
4.	Total Dissolved Solids	mg/L	44	2100 mg/L	IS3025(P-16)84Re.02
5.	Chloride as Cl	mg/L	7.49	NS*	IS3025(P-32)88Re.99 Argentometric method
6.	Calcium as Ca	mg/L	2.4	NS*	IS3025(P-40)91Re.03 EDTA Titrimetric method
7.	Magnesium as Mg	mg/L	1.32	NS*	IS3025(P-46)94Re.99 EDTA method
8.	Oil & Grease	mg/L	BDL*	10 mg/L	APHA(22 nd Ed)5520 D
9.	Sulphate as SO ₄	mg/L	2.9	NS*	APHA(22 nd Ed)4500 SO ₄ E Turbidimetric method
10.	Silica as SiO ₂	mg/L	4.87	NS*	APHA(22 nd Ed)4500 Si C
11.	COD	mg/L	29	100 mg/L	APHA(22 nd Ed) 5520-D OPEN REFLUX
12.	BOD (3 Days @ 27 °C)	mg/L	7	30 mg/L	IS 3025 (P-44)
13.	Ammonical Nitrogen as NH ₃	mg/L	0.74	50 mg/L	IS-3025-(P-34)
14.	Temperature	°C	28	40 °C	IS-3025(P-9)
15.	Iron as Fe	mg/L	0.56	1 mg/L	AAS APHA(22 nd Ed)3111 B
16.	Nitrate Nitrogen as NO ₃	mg/L	0.21	NS*	IS3025(P-34)88 Chromotropic Acid Method
17.	Sodium as Na	%	55.36	60	AAS APHA (22 nd Ed.)3500 Na B

#Limit as per CC & A: AWH-87212 Issued Date: 20/07/2017 Valid up to: 22/05/2022

BDL*: Below Detection Limit, Minimum Detection Limit: Oil & Grease: 1.0 mg/L

NS*: Not specified #Details given by client.

H. T. Shah
Lab Manager

Dr. Arun Bajpai
Lab Manager (Q)

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Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**POLLUCON** LABORATORIES PVT. LTD.**TEST CERTIFICATE FOR RAW EFFLUENT WATER**

Customer's Name and Address :

QR/5.10/32
Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE – 394510

Test Report No. : **PL/LT 0085**
 Issue Date : **05/08/2017**
 Customer's Ref. : **W.O : FL5001153**
DTD:20.06.2017

Description of Sample	: Water Sample	Quantity/No. of Samples	: 02 Lit/One
Date of Sampling	: 12/07/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 13/07/2017	Lab ID	: LT/1707/12
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 13/07/2017	Date of Completion of Test	: 24/07/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	TEST METHOD
			RAW EFFLUENT (CTBD TANK) WTP 06	
1.	pH	--	8.15	IS3025(P-11)83Re.02
2.	Total Suspended Solids	mg/L	60	IS3025(P-17)84Re.02
3.	Total Dissolved Solids	mg/L	828	IS3025(P-16)84Re.02
4.	Total Hardness as CaCO ₃	mg/L	328	IS3025(P-21)84EDTARE.02
5.	Alkalinity	mg/L	192	IS3025(P-23)86Re.03
6.	Chloride as Cl	mg/L	149	IS3025(P-32)88Re.99 Argentometric method
7.	Calcium as Ca	mg/L	32.35	IS3025(P-40)91Re.03 EDTA Titrimetric method
8.	Magnesium as Mg	mg/L	59.14	IS3025(P-46)94Re.99 EDTA method
9.	Oil & Grease	mg/L	0.70	APHA(22 nd Edi)5520 D
10.	Iron as Fe	mg/L	0.58	AAS APHA(22 nd Edi)3111 B
11.	Sulphate as SO ₄	mg/L	65.27	APHA(22 nd Edi)4500 SO ₄ E Turbidimetric method
12.	Silica as SiO ₂	mg/L	18.76	APHA(22 nd Edi)4500 Si C
13.	COD	mg/L	82	APHA(22 nd Edi) 5520-D OPEN REFLUX
14.	BOD (3 Days @ 27 °C)	mg/L	30	IS 3025 (P-44)

H. T. Shah
Lab Manager

Dr. Arun Bajpai
Lab Manager (Q)

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**TEST CERTIFICATE FOR STACK GAS MONITORING**

Customer's Name and Address :

QR/5.10/32B

Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : **PL/LT 0090**Issue Date : **05/08/2017**Customer's Ref. : **W.O : FLS001153**
DTD:20.06.2017**STACK DETAILS & RESULT**

Location of Sampling	: FES Stack	Sampling Procedure	: As Per Table
Date of Sampling	: 12/07/2017	Protocol (purpose)	: Stack Gas Monitoring
Sampling By	: Pollucon Laboratories Pvt, Ltd.	Time of Sampling in Hrs	: 11:45
Sample Receipt Date	: 13/07/2017	Lab ID	: LT/1707/03 [A - C]
Date of Starting of Test	: 13/07/2017	Date of Completion	: 18/07/2017
Fuel#	: Natural Gas	Stack Temperature	: 140 °C
Stack Height#	: 35 meter	Velocity	: 7.28 m/sec
Instrument Used & Calibration Due Date	: Ecotech instrument stack sampler ESS 100, SI.No.13-1-71 & Date: 28.04.2018		

SR. NO.	TEST PARAMETER	UNIT	RESULTS	GPCB NORM**	TEST / SAMPLING METHOD
1	Particulate Matter	mg/Nm ³	BDL*	150	IS:11255 (Part-I):1985
2	Sulfur dioxide (as SO ₂)	ppm	2.49	100	IS:11255 (Part-II):1985
3	Oxides of Nitrogen (as NO _x)	ppm	15.75	50	IS:11255 (Part-VII):2005

** Limit as per CC & A: AWH-87212 Issued Date: 20/07/2017 Valid up to: 22/05/2022

BDL*: Below Detection Limit. Minimum Detection Limit : Particulate Matter: 10 mg/Nm³Results on 11 % O₂ Correction when Oxygen is greater than 11 % and 12 % CO₂ Correction when CO₂ is less than 12 %

Detailed given by customer

f y
H.T. Shah
Lab Manager

[Signature]
Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

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TEST CERTIFICATE FOR RAW EFFLUENT WATER

QR/5.10/32
Page: 1 of 1

Customer's Name and Address :

**M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510**

Test Report No. : **PL/LT 0096**
Issue Date : **22/08/2017**
Customer's Ref. : **W.O : FLS001153
DTD:20.06.2017**

Description of Sample	: Water Sample	Quantity/No. of Samples	: 02 Lit/One
Date of Sampling	: 12/08/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 13/08/2017	Lab ID	: LT/1708/09
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 13/08/2017	Date of Completion of Test	: 22/08/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	TEST METHOD
			RAW EFFLUENT (CTBD TANK) WTP 06	
1.	pH	--	8.96	IS3025(P-11)83Re.02
2.	Total Suspended Solids	mg/L	48	IS3025(P-17)84Re.02
3.	Total Dissolved Solids	mg/L	768	IS3025(P-16)84Re.02
4.	Total Hardness as CaCO ₃	mg/L	428	IS3025(P-21)84EDTARe.02
5.	Alkalinity	mg/L	348	IS3025(P-23)86Re.03
6.	Chloride as Cl	mg/L	111	IS3025(P-32)88Re.99 Argentometric method
7.	Calcium as Ca	mg/L	23.2	IS3025(P-40)91Re.03 EDTA Titrimetric method
8.	Magnesium as Mg	mg/L	88.8	IS3025(P-46)94Re.99 EDTA method
9.	Oil & Grease	mg/L	BDL*	APHA(22 nd Edi)5520 D
10.	Iron as Fe	mg/L	0.43	AAS APHA(22 nd Edi)3111 B
11.	Sulphate as SO ₄	mg/L	25.76	APHA(22 nd Edi)4500 SO ₄ E Turbidimetric method
12.	Silica as SiO ₂	mg/L	16.66	APHA(22 nd Edi)4500 Si C
13.	COD	mg/L	88	APHA(22 nd Edi) 5520-D OPEN REFLUX
14.	BOD (3 Days @ 27 °C)	mg/L	26	IS 3025 (P-44)

BDL*: Below Detection Limit, Minimum Detection Limit: Oil & Grease: 1.0 mg/L



H. T. Shah
Lab Manager



Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf

● FSSAI Approved Lab ● Recognised by MoEF, New Delhi Under Sec. 12 of Environmental (Protection) Act-1986 ● GPCB approved schedule II auditor ● ISO 14001 : 2004 ● OHSAS 18001 : 2007 ● ISO 9001 : 2008

Head Office : 544, Belgium Tower, Ring Road, Opp. Linear Bus Stand, Surat-395003. (Guj.) Tele : (0261) 2455751, 2601224, 2601106
Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-390507
Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**TEST CERTIFICATE FOR RAW EFFLUENT WATER**

QR/5.10/32

Page: 1 of 1

Customer's Name and Address :

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : **PL/LT 0097**
 Issue Date : **22/08/2017**
 Customer's Ref. : **W.O : FLS001153**
DTD:20.06.2017

Description of Sample	: Water Sample	Quantity/No. of Samples	: 02 Lit/One
Date of Sampling	: 12/08/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 13/08/2017	Lab ID	: LT/1708/10
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 13/08/2017	Date of Completion of Test	: 22/08/2017

TEST RESULT

SR. NO.	TEST PARAMETERS	UNIT	RESULT	GPCB LIMIT _e	TEST METHOD
			TREATED EFFLUENT (RO PERMEATE) WTP 05		
1.	Colour	Co-pt	30	100 Co-pt	IS3025(P-4)83Re.02
2.	pH	--	8.31	6.5 to 8.5	IS3025(P-11)83Re.02
3.	Total Suspended Solids	mg/L	52	100 mg/L	IS3025(P-17)84Re.02
4.	Total Dissolved Solids	mg/L	80	2100 mg/L	IS3025(P-16)84Re.02
5.	Chloride as Cl	mg/L	13.99	NS*	IS3025(P-32)88Re.99 Argentometric method
6.	Calcium as Ca	mg/L	2.8	NS*	IS3025(P-40)91Re.03 EDTA Titrimetric method
7.	Magnesium as Mg	mg/L	0.72	NS*	IS3025(P-46)94Re.99 EDTA method
8.	Oil & Grease	mg/L	BDL*	10 mg/L	APHA(22 nd Ed.)5520 D
9.	Sulphate as SO ₄	mg/L	3.08	NS*	APHA(22 nd Ed.)4500 SO ₄ E Turbidimetric method
10.	Silica as SiO ₂	mg/L	6.4	NS*	APHA(22 nd Ed.)4500 Si C
11.	COD	mg/L	28	100 mg/L	APHA(22 nd Ed.) 5520-D OPEN REFLUX
12.	BOD (3 Days @ 27 °C)	mg/L	9.0	30 mg/L	IS 3025 (P-44)
13.	Ammonical Nitrogen as NH ₃	mg/L	0.62	50 mg/L	IS-3025-(P-34)
14.	Temperature	°C	29	40 °C	IS-3025(P-9)
15.	Iron as Fe	mg/L	0.47	1 mg/L	AAS APHA(22 nd Ed.)3111 B
16.	Nitrate Nitrogen as NO ₃	mg/L	0.22	NS*	IS3025(P-34)88 Chromotropic Acid Method
17.	Sodium as Na	%	58.02	60	AAS APHA (22 nd Ed.)3500 Na B

#Limit as per CC & A: AWH-87212 Issued Date: 20/07/2017 Valid up to: 22/05/2022

BDL*: Below Detection Limit, Minimum Detection Limit: Oil & Grease: 1.0 mg/L

NS*: Not specified #Details given by client.

H. T. Shah
 Lab Manager

Dr. Arun Bajpai
 Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf

● FSSAI Approved Lab ● Recognised by MoEF, New Delhi Under Sec. 12 of Environmental (Protection) Act-1986 ● GPCB approved schedule II auditor ● ISO 14001 : 2004 ● OHSAS 18001 : 2007 ● ISO 9001 : 2008

Head Office : 544, Belgium Tower, Ring Road, Opp. Linear Bus Stand, Surat-395003. (Guj.) Tele : (0261) 2455751, 2601224, 2601106
 Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-39050
 Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**TEST CERTIFICATE FOR RAW EFFLUENT WATER**

QR/5.10/32

Page: 1 of 1

Customer's Name and Address :

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510


Test Report No. : **PL/LT 0098**Issue Date : **22/08/2017**Customer's Ref. : **W.O : FL5001153**
DTD:20.06.2017


Description of Sample	: Water Sample	Quantity/No. of Samples	: 02 Lit/One
Date of Sampling	: 12/08/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 13/08/2017	Lab ID	: LT/1708/11
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 13/08/2017	Date of Completion of Test	: 22/08/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	TEST METHOD
			RO REJECT WTP 12	
1.	Colour	Co-pt	30	IS3025(P-4)83Re.02
2.	pH	---	8.05	IS3025(P-11)83Re.02
3.	Total Suspended Solids	mg/L	78	IS3025(P-17)84Re.02
4.	Total Dissolved Solids	mg/L	2488	IS3025(P-16)84Re.02
5.	Chloride as Cl	mg/L	599	IS3025(P-32)88Re.99 Argentometric method
6.	Calcium as Ca	mg/L	136	IS3025(P-40)91Re.03 EDTA Titrimetric method
7.	Magnesium as Mg	mg/L	115	IS3025(P-46)94Re.99 EDTA method
8.	Oil & Grease	mg/L	BDL*	APHA(22 nd Ed.)5520 D
9.	Iron as Fe	mg/L	0.017	AAS APHA(22 nd Ed.)3111 B
10.	Sulphate as SO ₄	mg/L	138	APHA(22 nd Ed.)4500 SO ₄ E Turbidimetric method
11.	Silica as SiO ₂	mg/L	92.6	APHA(22 nd Ed.)4500 SI C
12.	COD	mg/L	128	APHA(22 nd Ed.) 5520-D OPEN REFLUX
13.	BOD (3 Days @ 27 °C)	mg/L	32	IS 3025 (P-44)
14.	Ammonical Nitrogen as NH ₃	mg/L	1.79	IS-3025-(P-34)
15.	Temperature	°C	29	IS-3025(P-9)
16.	Nitrate Nitrogen as NO ₃	mg/L	0.49	IS3025(P-34)88 Chromotropic Acid Method
17.	Sodium as Na	%	41.54	AAS APHA (22 nd Ed.)3500 Na B

BDL*: Below Detection Limit, Minimum Detection Limit: Oil & Grease: 1.0 mg/L.

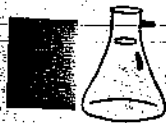

H. T. Shah
Lab Manager


Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf

● FSSAI Approved Lab ● Recognised by MoEF, New Delhi Under Sec. 12 of Environmental (Protection) Act-1986 ● GPCB approved schedule II auditor ● ISO 14001 : 2004 ● OHSAS 18001 : 2007 ● ISO 9001 : 2004

Head Office : 544, Belgium Tower, Ring Road, Opp. Linear Bus Stand, Surat-395003. (Guj.) Tele : (0261) 2455751, 2601224, 2601106
 Branch Office : Plot No. 5/6, Pollucon House, Opp. Baijal Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-39050
 Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**POLLUCON** LABORATORIES PVT. LTD.**TEST CERTIFICATE FOR RAW EFFLUENT WATER**

QR/5.10/32

Page: 1 of 1

Customer's Name and Address :

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : **PL/LT 0109**Issue Date : **29/09/2017**Customer's Ref. : **W.O : FLS001153**
DTD:20.06.2017

Description of Sample	: Water Sample	Quantity/No. of Samples	: 02 Lit/One
Date of Sampling	: 07/09/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 08/09/2017	Lab ID	: LT/1709/08
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 08/09/2017	Date of Completion of Test	: 18/09/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	TEST METHOD
			RAW EFFLUENT	
1.	pH	--	8.67	IS3025(P-11)83Re.02
2.	Total Suspended Solids	mg/L	52	IS3025(P-17)84Re.02
3.	Total Dissolved Solids	mg/L	616	IS3025(P-16)84Re.02
4.	Total Hardness as CaCO ₃	mg/L	216	IS3025(P-21)84EDTARE.02
5.	Alkalinity	mg/L	192	IS3025(P-23)86Re.03
6.	Chloride as Cl	mg/L	79.97	IS3025(P-32)88Re.99 Argentometric method
7.	Calcium as Ca	mg/L	14.4	IS3025(P-40)91Re.03 EDTA Titrimetric method
8.	Magnesium as Mg	mg/L	43.2	IS3025(P-46)94Re.99 EDTA method
9.	Oil & Grease	mg/L	302	APHA(22 nd Edl)5520 D
10.	Iron as Fe	mg/L	0.51	AAS APHA(22 nd Edl)3111 B
11.	Sulphate as SO ₄	mg/L	17.6	APHA(22 nd Edl)4500 SO ₄ E Turbidimetric method
12.	Silica as SiO ₂	mg/L	19.2	APHA(22 nd Edl)4500 SI C
13.	COD	mg/L	90	APHA(22 nd Edl) 5520-D OPEN REFLUX
14.	BOD (3 Days @ 27 °C)	mg/L	28	IS 3025 (P-44)

H. T. Shah**Lab Manager**

SSAI Approved Lab by MoEF, New Delhi Under
 Sec. 12 of Environmental (Protection) Act-1986

● GPCB approved
 schedule II auditor

● ISO 14001 : 2004 ● OHSAS 18001 : 2007 ● ISO 9001 : 2008

Dr. Arun Bajpai
Lab Manager (Q)

Head Office : 544, Belgium Tower, Ring Road, Durgam Chaudhary, Hyderabad-500043, (Guj.) Tele : (0261) 2455751, 2601224, 2601108
 Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-3905007.
 Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**POLLUCON LABORATORIES PVT. LTD.****TEST CERTIFICATE FOR RAW EFFLUENT WATER**QR/5.10/32
Page: 1 of 1

Customer's Name and Address :

**M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510**Test Report No. : **PL/LT 0110**
Issue Date : **29/09/2017**
Customer's Ref. : **W.O. No. FLS001001
DTD 21.07.2016**

Description of Sample	: Water Sample	Quantity/No. of Samples	: 05 Lit/One
Date of Sampling	: 07/09/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 08/09/2017	Lab ID	: LT/1709/09
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 08/09/2017	Date of Completion of Test	: 18/09/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	TEST METHOD
			RAW WATER	
1.	pH	--	9.25	IS3025(P-11)83Re.02
2.	Turbidity	NTU	2.02	APHA 2130-B
3.	Electric Conductivity	µmho/cm	229	APHA 2510
4.	Total Suspended Solids	mg/L	36	IS3025(P-17)84Re.02
5.	Total Dissolved Solids	mg/L	156	IS3025(P-16)84Re.02
6.	Total Hardness as CaCO ₃	mg/L	82	IS3025(P-21)84EDTARe.02
7.	Residual Chlorine	mg/L	<0.1	APHA(22 nd Edi)4500 Cl G-DPD Colorimetric method
8.	Dissolved Oxygen	mg/L	5.2	IS3025(P-38)89Re.99Titrimetric method
9.	Calcium as Ca	mg/L	16	IS3025(P-40)91Re.03EDTA Titrimetric method
10.	Magnesium as Mg	mg/L	10.08	IS3025(P-46)94Re.99EDTA method
11.	Silica as SiO ₂	mg/L	6.06	APHA(22 nd Edi)4500 Si C
12.	Fluoride as F	mg/L	BDL*	APHA(22 nd Edi) 4500 F D SPANDS Method
13.	Ammonical Nitrogen as NH ₃	mg/L	2.32	IS-3025-(P-34)
14.	Temperature	°C	30	IS-3025(P-9)
15.	Nitrate Nitrogen as NO ₃	mg/L	0.76	IS3025(P-34)88Chromotropic Acid Method
16.	Total Alkalinity	mg/L	96	IS3025(P-23)86Re.03
17.	Sulphate as SO ₄	mg/L	5.8	APHA(22 nd Edi)4500 SO ₄ E
18.	Chloride as Cl	mg/L	30.99	IS3025(P32)88Re.99
19.	Iron as Fe	mg/L	0.017	AAS APHA(22 nd Edi)3111 B

BDL*: Below Detection Limit, Minimum Detection Limit: Fluoride as F: 0.01 mg/L

H. T. Shah**Lab Manager****Dr. Arun Bajpai**
Lab Manager (Q)● FSSAI Approved Lab by MoEF, New Delhi Under
Sec. 12 of Environmental (Protection) Act-1986● GPCB approved
schedule II auditor

● ISO 14001 : 2004 ● OHSAS 18001 : 2007 ● ISO 9001 : 2008

Head Office : 544, Belgium Tower, Ring Road, Gandhinagar, Surat-393003, (Guj.) Tele : (0261) 2455751, 2601224, 2601106
 Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-3905007.
 Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**POLLUCON** LABORATORIES PVT. LTD.**TEST CERTIFICATE FOR RAW EFFLUENT WATER**

QR/5.10/32

Page: 1 of 1

Customer's Name and Address :

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : **PL/LT 0111**Issue Date : **29/09/2017**Customer's Ref. : **W.O : FLS001153**
DTD:20.06.2017

Description of Sample : **Water Sample** Quantity/No. of Samples : **02 Lit/One**
Date of Sampling : **07/09/2017** Sampling Procedure : **Grab**
Sampling By : **Pollucon Laboratories Pvt. Ltd.** Protocol (purpose) : **QC**
Sample Receipt Date : **08/09/2017** Lab ID : **LT/1709/10**
Packing/ Seal : **Sealed** Test Parameters : **As per table**
Date of Starting of Test : **08/09/2017** Date of Completion of Test : **18/09/2017**

TEST RESULT

SR. NO.	TEST PARAMETERS	UNIT	RESULT	GPCB LIMIT#	TEST METHOD
			TREATED EFFLUENT (RO PERMEATE)		
1.	Colour	Co-pt	10	100 Co-pt	IS3025(P-4)83Re.02
2.	pH	--	8.10	6.5 to 8.5	IS3025(P-11)83Re.02
3.	Total Suspended Solids	mg/L	46	100 mg/L	IS3025(P-17)84Re.02
4.	Total Dissolved Solids	mg/L	44	2100 mg/L	IS3025(P-16)84Re.02
5.	Chloride as Cl	mg/L	12.99	NS*	IS3025(P-32)88Re.99 Argentometric method
6.	Calcium as Ca	mg/L	4.0	NS*	IS3025(P-40)91Re.03 EDTA Titrimetric method
7.	Magnesium as Mg	mg/L	2.88	NS*	IS3025(P-46)94Re.99 EDTA method
8.	Oil & Grease	mg/L	BDL*	10 mg/L	APHA(22 nd Edi)5520 D
9.	Sulphate as SO ₄	mg/L	2.76	NS*	APHA(22 nd Edi)4500 SO ₄ E Turbidimetric method
10.	Silica as SiO ₂	mg/L	2.84	NS*	APHA(22 nd Edi)4500 Si C
11.	COD	mg/L	24	100 mg/L	APHA(22 nd Edi) 5520-D OPEN REFLUX
12.	BOD (3 Days @ 27 °C)	mg/L	8.0	30 mg/L	IS 3025 (P-44)
13.	Ammonical Nitrogen as NH ₃	mg/L	0.56	50 mg/L	IS-3025-(P-34)
14.	Temperature	°C	30	40 °C	IS-3025(P-9)
15.	Iron as Fe	mg/L	0.21	1 mg/L	AAS APHA(22 nd Edi)3111 B
16.	Nitrate Nitrogen as NO ₃	mg/L	0.019	NS*	IS3025(P-34)88 Chromotropic Acid Method
17.	Sodium as Na	%	54.55	60	AAS APHA (22 nd Edi.)3500 Na B

#Limit as per CC & A: AWH-87212 Issued Date: 20/07/2017 Valid up to: 22/05/2022

BDL*: Below Detection Limit, Minimum Detection Limit: Oil & Grease: 1.0 mg/L

NS*: Not Specified #Details given by client.

H. T. Shah**Lab Manager**

SSAI Approved Lab
 Sec. 12 of Environmental (Protection) Act-1986

GPCB approved
 schedule II auditor

ISO 14001 : 2004 • OHSAS 18001 : 2007 • ISO 9001 : 2008

Dr. Arun Bajpai
Lab Manager (Q)

Head Office : 544, Belgium Tower, Ring Road, Dorepat, Surat-395003, (Guj.) Tele : (0261) 2456751, 2601224, 2601106
 Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-3905007.
 Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com



TEST CERTIFICATE FOR RAW EFFLUENT WATER

QR/5:10/32

Page: 1 of 1

Customer's Name and Address :

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : **PL/LT 0112**

Issue Date : **29/09/2017**

Customer's Ref. : **W.O : FLS001153**
DTD:20.06.2017

Description of Sample	: Water Sample	Quantity/No. of Samples	: 02 Lit/One
Date of Sampling	: 07/09/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 08/09/2017	Lab ID	: LT/1709/11
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 08/09/2017	Date of Completion of Test	: 18/09/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	TEST METHOD
			RO REJECT	
1.	Colour	Co-pt	40	IS3025(P-4)83Re.02
2.	pH	--	8.03	IS3025(P-11)83Re.02
3.	Total Suspended Solids	mg/L	84	IS3025(P-17)84Re.02
4.	Total Dissolved Solids	mg/L	2832	IS3025(P-16)84Re.02
5.	Chloride as Cl	mg/L	652	IS3025(P-32)88Re.99 Argentometric method
6.	Calcium as Ca	mg/L	160	IS3025(P-40)91Re.03 EDTA Titrimetric method
7.	Magnesium as Mg	mg/L	168	IS3025(P-46)94Re.99 EDTA method
8.	Oil & Grease	mg/L	BDL*	APHA(22 nd Edi)5520 D
9.	Iron as Fe	mg/L	0.021	AAS APHA(22 nd Edi)3111 B
10.	Sulphate as SO ₄	mg/L	144	APHA(22 nd Edi)4500 SO ₄ E Turbidimetric method
11.	Silica as SiO ₂	mg/L	84	APHA(22 nd Edi)4500 Si C
12.	COD	mg/L	108	APHA(22 nd Edi) 5520-D OPEN REFLUX
13.	BOD (3 Days @ 27 °C)	mg/L	34.0	IS 3025 (P-44)
14.	Ammonical Nitrogen as NH ₃	mg/L	1.59	IS-3025-(P-34)
15.	Temperature	°C	30	IS-3025(P-9)
16.	Nitrate Nitrogen as NO ₃	mg/L	0.58	IS3025(P-34)88 Chromotropic Acid Method
17.	Sodium as Na	%	40.54	AAS APHA (22 nd Edi.)3500 Na B

BDL: Below Detection Limit, Minimum Detection Limit: Oil & Grease: 1.0 mg/L.

H. T. Shah

Dr. Arun Bajpai
Lab Manager (Q)

FSSAI Approved Lab by MoEF, New Delhi Under
 Sec. 12 of Environmental (Protection) Act-1986

● GPCB approved
 schedule II auditor

● ISO 14001: 2004 ● OHSAS 18001: 2007 ● ISO 9001: 2008

Head Office : 544, Belgium Tower, Ring Road, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-395007.
 Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-395007.
 Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

Annexure 6:
Raw Sewage and Treated Sewage Analysis
Reports



POLLUCON LABORATORIES PVT. LTD.

TEST CERTIFICATE FOR RAW SEWAGE WATER

Customer's Name and Address :

QR/5.10/32

Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510.

Test Report No. : PL/LT 0045
Issue Date : 01/05/2017
Customer's Ref. : W.O. No: FLS061001
DTD 21.07.2016

Description of Sample	: Water Sample	Quantity/No. of Samples	: 05 Lit/One
Date of Sampling	: 22/04/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 22/04/2017	Lab ID	: LT/1704/06
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 22/04/2017	Date of Completion of Test	: 01/05/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	TEST METHOD
			RAW SEWAGE STP 01	
1.	pH	-	7.26	IS 3025(P-11)83Re.02
2.	Total Suspended Solids	mg/L	140	IS 3025(P-17)84Re.02
3.	Total Dissolved Solids	mg/L	578	IS 3025(P-16)84Re.02
4.	COD	mg/L	190	APHA(22nd Ed) 5520-DOPEN REFLUX.
5.	BOD (3 Days @ 27 °C)	mg/L	40	IS 3025 (P-44)

H. T. Shah

Lab Manager

Dr. Arun Bajpai

Lab Manager

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• GPCB approved
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• ISO 14001: 2004 • ISO 9001: 2008

Head Office : 544, Belgium Tower Road, Post: Keshavnagar, Surat-395003, (Guj.)
Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinagar Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-390507.
Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**POLLUCON LABORATORIES PVT. LTD.****TEST CERTIFICATE FOR TREATED SEWAGE WATER**

Customer's Name and Address :

QR/S.10/32

Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.,
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : **PL/LT 0046**Issue Date : **01/05/2017**Customer's Ref. : **V.O. No. FLS001001
STD 21.07.2015**

Description of Sample	: Water Sample	Quantity/No. of Samples	: 05 Lit/One
Date of Sampling	: 22/04/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 22/04/2017	Lab ID	: LT/1704/07
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 22/04/2017	Date of Completion of Test	: 01/05/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	GPCB LIMIT	TEST METHOD
			TREATED SEWAGE STP 02		
1.	pH	—	7.58	Not Specified	IS3025(P-11)S3Re.02
2.	Total Suspended Solids	mg/L	24	30	IS3025(P-17)S4Re.02
3.	Total Dissolved Solids	mg/L	599	Not Specified	IS3025(P-16)S4Re.02
4.	COD	mg/L	72	Not Specified	APHA(22 nd Ed) 5520-D OPEN REFLUX
5.	BOD (3 Days @ 27 °C)	mg/L	18	< 20	IS 3025 (P-44)
6.	Free Residual Chlorine	mg/L	< 0.1	Min 0.5	APHA(22 nd Ed) 4500 Cl G-DPO Calorimetric method

BOD*: Below Detection Limit, Minimum Detection Limit, BOD: 10 mg/L, #Details given by client.

H. T. Shah**Lab Manager****Dr. Afun Bajpai****Lab Manager (Q)**

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 Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**POLLUCON LABORATORIES PVT. LTD.****TEST CERTIFICATE FOR RAW SEWAGE WATER**

Customer's Name and Address :

QR/5.10/32

Page: 1 of 1

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HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA, PIN CODE - 394510.

Test Report No. : **PL/LT 0056**Issue Date : **20/05/2017**Customer's Ref. : **W.O. No. FLS001001
DTD 21.07.2016**

Description of Sample	: Water Sample	Quantity/No. of Samples	: 05 Lit/One
Date of Sampling	: 13/05/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 15/05/2017	Lab ID	: LT/1705/11
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 15/05/2017	Date of Completion of Test	: 20/05/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	TEST METHOD
			RAW SEWAGE STP 01	
1.	pH		7.16	IS3025(P-11)83Re.02
2.	Total Suspended Solids	mg/L	82	IS3025(P-17)84Re.02
3.	Total Dissolved Solids	mg/L	609	IS3025(P-16)84Re.02
4.	COD	mg/L	132	APHA(22 nd Ed) 5520-DOPEN REFLUX
5.	BOD (3 Days @ 27 °C)	mg/L	34	IS 3025 (P-44)

H. T. Shah**Lab Manager****Dr. Arun Bajpai****Lab Manager (Q)**

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POLLUCON LABORATORIES PVT. LTD.

TEST CERTIFICATE FOR TREATED SEWAGE WATER

Customer's Name and Address :

QR/5.10/32

Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : PL/LT 0057

Issue Date : 20/05/2017

Customer's Ref. : W.O. No. FL5001001
DTD 21.07.2015

Description of Sample	: Water Sample	Quantity/No. of Samples	: 05 Lit/One
Date of Sampling	: 13/05/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 15/05/2017	Lab ID	: LT/1705/12
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 15/05/2017	Date of Completion of Test	: 20/05/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	GPCB LIMIT	TEST METHOD
			TREATED SEWAGE STP 02		
1.	pH		7.61	Not Specified	IS3025(P-11)83Re.02
2.	Total Suspended Solids	mg/L	22	30	IS3025(P-17)84Re.02
3.	Total Dissolved Solids	mg/L	567	Not Specified	IS3025(P-16)84Re.02
4.	COD	mg/L	38	Not Specified	APHA(22 nd Ed) 5520-DOPEN REFLUX
5.	BOD (3 Days @ 27 °C)	mg/L	11	< 20	IS 3025 (P-44)
6.	Free Residual Chlorine	mg/L	0.8	Min 0.5	APHA(22 nd Ed) 4500 Cl G-DPD Calorimetric method

BDL*: Below Detection Limit, Minimum Detection Limit, BOD: 10 mg/L, #Details given by client.

fy
H. T. Shah

Lab Manager

Dr. Arun Bajpai

Lab Manager (Q)

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**POLLUCON** LABORATORIES PVT. LTD.**TEST CERTIFICATE FOR RAW SEWAGE WATER**

Customer's Name and Address :

QR/5.10/32

Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510.

Test Report No. : **PL/LT 0070**Issue Date : **06/07/2017**Customer's Ref. : **W.O. No. FLS001001
DTD 21.07.2016**

Description of Sample	: Water Sample	Quantity/No. of Samples	: 02 Lit/One
Date of Sampling	: 24/06/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 26/06/2017	Lab ID	: LT/1706/11
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 26/06/2017	Date of Completion of Test	: 01/07/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	TEST METHOD
			RAW SEWAGE STP.01	
1.	pH	—	7.49	IS3025(P-11)83Re.02
2.	Total Suspended Solids	mg/L	102	IS3025(P-17)84Re.02
3.	Total Dissolved Solids	mg/L	525	IS3025(P-16)84Re.02
4.	COD	mg/L	126	APHA(22 nd Ed) 5520-DOPEN REFLUX
5.	BOD (3 Days @ 27 °C)	mg/L	28	IS 3025 (P-44)

H. T. Shah
Lab Manager

Dr. Arun Bajpai

Lab Manager (Q)

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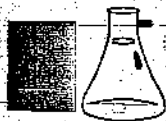
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Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com



POLLUCON LABORATORIES PVT. LTD.

TEST CERTIFICATE FOR TREATED SEWAGE WATER

Customer's Name and Address :

QR/5.10/32

Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : **PL/LT 0071**

Issue Date : **06/07/2017**

Customer's Ref. : **W.O. No. FLS001001
 DTD 21.07.2016**

Description of Sample	: Water Sample	Quantity/No. of Samples	: 05 Lit/One
Date of Sampling	: 24/06/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 26/06/2017	Lab ID	: LT/1706/12
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 26/06/2017	Date of Completion of Test	: 01/07/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	GPCB LIMIT#	TEST METHOD
			TREATED SEWAGE STP 02		
1.	pH	--	8.07	Not Specified	IS3025(P-11)83Re.02
2.	Total Suspended Solids	mg/L	26	30	IS3025(P-17)84Re.02
3.	Total Dissolved Solids	mg/L	556	Not Specified	IS3025(P-16)84Re.02
4.	COD	mg/L	42	Not Specified	APHA(22 nd Edi) 5520-DOPEN REFLUX
5.	BOD (3 Days @ 27 °C)	mg/L	10	< 20	IS 3025 (P-44)
6.	Free Residual Chlorine	mg/L	0.7	Min 0.5	APHA(22 nd Edi)4500 CI G-DPD Calorimetric method

BDL*: Below Detection Limit, Minimum Detection Limit, BOD: 10 mg/L, #Details given by client.

H. T. Shah
Lab Manager

Dr. Arun Bajpai
Lab Manager (Q)

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**TEST CERTIFICATE FOR RAW SEWAGE WATER**

QR/5.10/32

Page: 1 of 1

Customer's Name and Address :


M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE – 394510.

Test Report No. : **PL/LT 0083**
Issue Date : **05/08/2017**
Customer's Ref. : **W.O : FLS001153**
DTD:20.06.2017

Description of Sample	: Water Sample	Quantity/No. of Samples	: 02 Lit/One
Date of Sampling	: 12/07/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 13/07/2017	Lab ID	: LT/1707/10
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 13/07/2017	Date of Completion of Test	: 24/07/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	TEST METHOD
			RAW SEWAGE STP-01 Inlet	
1.	pH	--	7.42	IS3025(P-11)83Re.02
2.	Total Suspended Solids	mg/L	44	IS3025(P-17)84Re.02
3.	Total Dissolved Solids	mg/L	946	IS3025(P-16)84Re.02
4.	COD	mg/L	92	APHA(22 nd Edi) 5520-DOPEN REFLUX
5.	BOD (3 Days @ 27 °C)	mg/L	26	IS 3025 (P-44)


H. T. Shah
Lab Manager


Dr. Arun Bajpai
Lab Manager (Q)

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**POLLUCON** LABORATORIES PVT. LTD.**TEST CERTIFICATE FOR TREATED SEWAGE WATER**

QR/5.10/32

Page: 1 of 1

Customer's Name and Address :

M/S. I & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : **PL/LT 0084**
Issue Date : **05/08/2017**
Customer's Ref. : **W.O : FL5001153**
DTD:20.06.2017

Description of Sample : **Water Sample** Quantity/No. of Samples : **02 Lit/One**
Date of Sampling : **12/07/2017** Sampling Procedure : **Grab**
Sampling By : **Pollucon Laboratories Pvt. Ltd.** Protocol (purpose) : **QC**
Sample Receipt Date : **13/07/2017** Lab ID : **LT/1707/10**
Packing/ Seal : **Sealed** Test Parameters : **As per table**
Date of Starting of Test : **13/07/2017** Date of Completion of Test : **24/07/2017**

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	GPCB LIMIT#	TEST METHOD
			TREATED SEWAGE STP 02 Outlet		
1.	pH	--	7.23	Not Specified	IS3025(P-11)83Re.02
2.	Total Suspended Solids	mg/L	24	30	IS3025(P-17)84Re.02
3.	Total Dissolved Solids	mg/L	762	Not Specified	IS3025(P-16)84Re.02
4.	COD	mg/L	39	Not Specified	APHA(22 nd Ed) 5520-DOPEN REFLUX
5.	BOD (3 Days @ 27 °C)	mg/L	8.0	< 20	IS 3025 (P-44)
6.	Free Residual Chlorine	mg/L	0.7	Min 0.5	APHA(22 nd Ed)4500 Cl G-DPD Colorimetric method

#Limit as per CC & A: AWH-87212 Issued Date: 20/07/2017 Valid up to: 22/05/2022

H. T. Shah
Lab Manager

Dr. Arun Bajpai
Lab Manager (Q)

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**POLLUCON** LABORATORIES PVT. LTD.**TEST CERTIFICATE FOR RAW SEWAGE WATER**

QR/5.10/32

Page: 1 of 1

Customer's Name and Address :

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510.

Test Report No. : **PL/LT 0094**Issue Date : **22/08/2017**Customer's Ref. : **W.O : FL5001153**
DTD:20.05.2017

Description of Sample	: Water Sample	Quantity/No. of Samples	: 02 Lit/One
Date of Sampling	: 12/08/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 13/08/2017	Lab ID	: LT/1708/07
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 13/08/2017	Date of Completion of Test	: 22/08/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	TEST METHOD
			RAW SEWAGE STP 01 Inlet	
1.	pH	--	6.91	IS3025(P-11)83Re.02
2.	Total Suspended Solids	mg/L	48	IS3025(P-17)84Re.02
3.	Total Dissolved Solids	mg/L	914	IS3025(P-16)84Re.02
4.	COD	mg/L	102	APHA(22 nd Ed) 5520-DOPEN REFLUX
5.	BOD (3 Days @ 27 °C)	mg/L	28	IS 3025 (P-44)


H. T. Shah
Lab Manager


Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf

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Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

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Page: 1 of 1

Customer's Name and Address :


**M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510**Test Report No. : **PL/LT 0095**
Issue Date : **22/08/2017**
Customer's Ref. : **W.O : FL5001153
DTD:20.06.2017**

Description of Sample	: Water Sample	Quantity/No. of Samples	: 02 Lit/One
Date of Sampling	: 12/08/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 13/08/2017	Lab ID	: LT/1708/08
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 13/08/2017	Date of Completion of Test	: 22/08/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	GPCB LIMIT*	TEST METHOD
			TREATED SEWAGE STP 02 Outlet		
1.	pH	--	7.38	Not Specified	IS3025(P-11)83Re.02
2.	Total Suspended Solids	mg/L	28	30	IS3025(P-17)84Re.02
3.	Total Dissolved Solids	mg/L	880	Not Specified	IS3025(P-16)84Re.02
4.	COD	mg/L	36	Not Specified	APHA(22 nd Ed) 5520-DOPEN REFLUX
5.	BOD (3 Days @ 27 °C)	mg/L	11	< 20	IS 3025 (P-44)
6.	Free Residual Chlorine	mg/L	0.6	Min 0.5	APHA(22 nd Ed)4500 Cl G-DPD Colorimetric method

#Limit as per CC & A: AWH-87212 Issued Date: 20/07/2017 Valid up to: 22/05/2022


H. T. Shah
Lab Manager
Dr. Arun Bajpai
Lab Manager (Q)

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Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-390501
Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**POLLUCON** LABORATORIES PVT. LTD.**TEST CERTIFICATE FOR RAW SEWAGE WATER**QR/5.10/32
Page: 1 of 1

Customer's Name and Address :

**M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510.**Test Report No. : **PL/LT 0107**
Issue Date : **29/09/2017**
Customer's Ref. : **W.O : FLS001153
DTD:20.06.2017**

Description of Sample	: Water Sample	Quantity/No. of Samples	: 02 Lit/One
Date of Sampling	: 07/09/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 08/09/2017	Lab ID	: LT/1709/06
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 08/09/2017	Date of Completion of Test	: 18/09/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	TEST METHOD
			RAW SEWAGE STP Inlet	
1.	pH	--	6.99	IS3025(P-11)83Re.02
2.	Total Suspended Solids	mg/L	138	IS3025(P-17)84Re.02
3.	Total Dissolved Solids	mg/L	632	IS3025(P-16)84Re.02
4.	COD	mg/L	114	APHA(22 nd Ed) 5520-DOPEN REFLUX
5.	BOD (3 Days @ 27 °C)	mg/L	34	IS 3025 (P-44)

H. T. Shah**Lab Manager**
Dr. Arun Bajpai
Lab Manager (Q)

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● ISO 14001 : 2004 ● OHSAS 18001 : 2007 ● ISO 9001 : 2008

Head Office : 544, Belgium Tower, Ring Road, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-3905007.
Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-3905007.
Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com



POLLUCON LABORATORIES PVT. LTD.

TEST CERTIFICATE FOR TREATED SEWAGE WATER

QR/5.10/32
Page: 1 of 1

Customer's Name and Address :

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD. HAZIRA MANUFACTURING COMPLEX, POST: BHATHA, DIST: SURAT, GUJARAT, INDIA. PIN CODE - 394510	Test Report No. : PL/LT 0108 Issue Date : 29/09/2017 Customer's Ref. : W.O : FLS001153 DTD:20.06.2017
--	--

Description of Sample	: Water Sample	Quantity/No. of Samples	: 02 Lit/One
Date of Sampling	: 07/09/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 08/09/2017	Lab ID	: LT/1709/07
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 08/09/2017	Date of Completion of Test	: 18/09/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	GPCB LIMIT#	TEST METHOD
			TREATED SEWAGE STP Outlet		
1.	pH	--	7.70	Not Specified	IS3025(P-11)83Re.02
2.	Total Suspended Solids	mg/L	26	30	IS3025(P-17)84Re.02
3.	Total Dissolved Solids	mg/L	504	Not Specified	IS3025(P-16)84Re.02
4.	COD	mg/L	40	Not Specified	APHA(22 nd Ed) 5520-DOPEN REFLUX
5.	BOD (3 Days @ 27 °C)	mg/L	12	< 20	IS 3025 (P-44)
6.	Free Residual Chlorine	mg/L	0.8	Min 0.5	APHA(22 nd Ed) 4500 Cl G-DPD Calorimetric method

#Limit as per CC & A: AWH-87212 Issued Date: 20/07/2017 Valid up to: 22/05/2022

H. T. Shah

Lab Manager

Dr. Arun Bajpai
Lab Manager (Q)

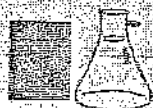
FSSAI Approved Lab by MoEF, New Delhi Under
Sec. 12 of Environmental (Protection) Act-1986

● GPCB approved
schedule II auditor

● ISO 14001 : 2004 ● OHSAS 18001 : 2007 ● ISO 9001 : 2008

Head Office : 544, Belgium Tower, Ring Road, Durgam Chattri, New Delhi-110015. (Guj.) Tele : (0261) 2455751, 2601224, 2601106
Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-390507.
Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

Annexure 7:
**Toxic Chemical Leach Potential Study &
ETP Sludge Analysis Reports**



POLLUCON LABORATORIES PVT. LTD.

TEST CERTIFICATE FOR ETP SLUDGE

Customer's Name and Address :

QR/5.10/32A

Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : PL/LT 0051

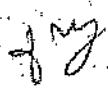
Issue Date : 01/05/2017


Customer's Ref. : FLS00354
Dated: 02/07/2015

Description of Sample	: ETP Sludge Sample	Quantity/No. of Samples	: 01 Kg/One
Date of Sampling	: 22/04/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 22/04/2017	Lab ID	: LT/1704/11
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 22/04/2017	Date of Completion of Test	: 01/05/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT
			ETP SLUDGE
1.	pH	--	8.72
2.	LOD	%	18.60
3.	SiO ₂	%	13.80
4.	Al ₂ O ₃	%	16.42
5.	Fe ₂ O ₃	%	31.48
6.	CaO	%	8.29
7.	MgO	%	6.96


H.T. Shah
Lab Manager


Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

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Branch Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinathi Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-390507
Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com Website : www.polluconlab.com

**POLLUCON LABORATORIES PVT. LTD.****TEST CERTIFICATE FOR ETP SLUDGE**

QR/5.10/32A

Page: 1 of 1

Customer's Name and Address :

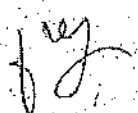
**M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.,
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA, PIN CODE - 394510**


Test Report No. : **PL/LT 0062**Issue Date : **20/05/2017**Customer's Ref. : **FL5000384
Dated: 06/07/2013**

Description of Sample	: ETP Sludge Sample	Quantity/No. of Samples	: 01 Kg/One
Date of Sampling	: 13/05/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 15/05/2017	Lab ID	: LT/1705/17
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 15/05/2017	Date of Completion of Test	: 20/05/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT
			ETP SLUDGE
1.	pH	--	8.39
2.	LOD	%	15.42
3.	SiO ₂	%	14.58
4.	Al ₂ O ₃	%	21.96
5.	Fe ₂ O ₃	%	31.28
6.	CaO	%	4.72
7.	MgO	%	4.26


H.T. Shah
Lab Manager


Dr. Arun Bajpai
Lab Manager (Q)

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Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com Website : www.polluconlab.com

**POLLUCON LABORATORIES PVT. LTD.****TEST CERTIFICATE FOR SOIL**

QR/5.10/32A

Customer's Name and Address :

Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510.

Test Report No. : **PL/LT 0064**Issue Date : **23/05/2017**Customer's Ref. : **W.O. No. FL5001001
DTD 21.07.2016**Description of Sample : **Soil Sample**Date of Sampling : **12/05/2017**Quantity/No. of Samples : **05 Kg/Two**Sampling By : **Pollucon Laboratories Pvt. Ltd.**Sampling Procedure : **USEPA/IS 2720 etc.**Sample Receipt Date : **13/05/2017**Protocol (purpose) : **USEPA/IS 2720 etc.**Packing/ Seal : **Sealed**Lab ID : **LT/1705/09 & 10**Date of Starting of Test : **13/05/2017**Test Parameters : **As per table**Test Method : **USEPA/IS 2720 etc.**Date of Completion of Test : **23/05/2017****TEST RESULT**

SR. NO	TEST PARAMETERS	UNIT	RESULT	
			NEAR RESERVOIR	Near STP
1	pH	—	8.47	9.01
2	Electrical Conductivity	µmho/cm	11	844
3	Molsture	%	26.2	24.6
4	Texture	—	Sandy Loam	Sandy Loam
5	Organic Matter	%	0.49	0.33
6	Nitrogen as N	%	0.051	0.058
7	Phosphorus as P ₂ O ₅	%	0.18	0.27
8	Potassium as K	mg/L	168	150
9	Sulphate as SO ₄	mg/L	119	110
10	Calcium as Ca	mg/L	78	92
11	Magnesium as Mg	mg/L	19.2	18.4
12	C:N Ratio	—	1:9.6	1:5.6

H.T. Shah
H.T. Shah
Lab Manager

Dr. Arun Bajpai
Dr. Arun Bajpai
Lab Manager (Q)

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Tele: (0261) 2635750, 2635751 E-mail: pollucon@gmail.com, Website: www.polluconlab.com

**POLLUCON** LABORATORIES PVT. LTD.**TEST CERTIFICATE FOR ETP SLUDGE**

QR/5.10/32A

Page: 1 of 1

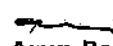
Customer's Name and Address :

**M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510**Test Report No. : **PL/LT 0091**Issue Date : **05/08/2017**Customer's Ref. : **W.O : FLS001153
DTD:20.06.2017**

Description of Sample	: ETP Sludge Sample	Quantity/No. of Samples	: 02 Kg/One
Date of Sampling	: 12/07/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 13/07/2017	Lab ID	: LT/1707/09
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 13/07/2017	Date of Completion of Test	: 22/07/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT
			ETP SLUDGE
1.	pH	--	8.45
2.	LOD	%	18.41
3.	SiO ₂	%	13.89
4.	Al ₂ O ₃	%	21.35
5.	Fe ₂ O ₃	%	29.50
6.	CaO	%	4.46
7.	MgO	%	3.76


H.T. Shah
Lab Manager
Dr. Arun Bajpai
Lab Manager (Q)

Note: This report is subject to terms & conditions mentioned overleaf.

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Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**TEST CERTIFICATE FOR SOIL**

QR/5.10/32A

Customer's Name and Address :

Page: 1 of 1

M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510.


Test Report No. : **PL/LT 0089**
Issue Date : **05/08/2017**
Customer's Ref. : **W.O : FLS001153**
DTD:20.06.2017

Description of Sample : **Soil Sample**
Date of Sampling : **12/07/2017** Quantity/No. of Samples : **05 Kg/Two**
Sampling By : **Pollucon Laboratories Pvt. Ltd.** Sampling Procedure : **USEPA/IS 2720 etc.**
Sample Receipt Date : **13/07/2017** Protocol (purpose) : **USEPA/IS 2720 etc.**
Packing/ Seal : **Sealed** Lab ID : **LT/1707/07 & 08**
Date of Starting of Test : **13/07/2017** Test Parameters : **As per table**
Test Method : **USEPA/IS 2720 etc.** Date of Completion of Test : **23/07/2017**

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT	
			NEAR RESERVOIR	Near STP
1	pH	--	8.35	8.48
2	Electrical Conductivity	µmho/cm	302	82
3	Moisture	%	25.25	25.05
4	Texture	--	Sandy Loam	Sandy Loam
5	Organic Matter	%	0.40	0.36
6	Nitrogen as N	%	0.06	0.062
7	Phosphorus as P ₂ O ₅	%	0.24	0.23
8	Potassium as K	mg/L	151	139
9	Sulphate as SO ₄	mg/L	110	103
10	Calcium as Ca	mg/L	79	83
11	Magnesium as Mg	mg/L	19.56	16.52
12	C:N Ratio	--	1:6.6	1:5.8


H.T. Shah
Lab Manager


Dr. Arun Bajpai
Lab Manager (Q)

● FSSAI Approved Lab ● Recognised by MAF, New Delhi ● ISO 14001:2004 ● ISO 14001:2004 ● OHSAS 18001:2007 ● ISO 9001:2008
Sec. 12 of Environmental (Protection) Act-1986 ● schedule II auditor

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Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

**POLLUCON LABORATORIES PVT. LTD.****TEST CERTIFICATE FOR ETP SLUDGE**QR/5.10/32A
Page: 1 of 1

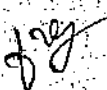
Customer's Name and Address :

**M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510**Test Report No. : **PL/LT 0100**Issue Date : **22/08/2017**Customer's Ref. : **W.O : FLS001153
DTD:20.06.2017**

Description of Sample	: ETP Sludge Sample	Quantity/No. of Samples	: 02 Kg/One
Date of Sampling	: 12/08/2017	Sampling Procedure	: Grab
Sampling By	: Pollucon Laboratories Pvt. Ltd.	Protocol (purpose)	: QC
Sample Receipt Date	: 13/08/2017	Lab ID	: LT/1708/06
Packing/ Seal	: Sealed	Test Parameters	: As per table
Date of Starting of Test	: 13/08/2017	Date of Completion of Test	: 22/08/2017

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT
			ETP SLUDGE
1.	pH	--	7.38
2.	LOD	%	13.04
3.	SiO ₂	%	11.30
4.	Al ₂ O ₃	%	21.18
5.	Fe ₂ O ₃	%	33.74
6.	CaO	%	5.66
7.	MgO	%	6.28


**H.T. Shah
Lab Manager**
**Dr. Arun Bajpai
Lab Manager (Q)**

Note: This report is subject to terms & conditions mentioned overleaf.

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**POLLUCON** LABORATORIES PVT. LTD.**TEST CERTIFICATE FOR ETP SLUDGE**

QR/5.10/32A

Page: 1 of 1

Customer's Name and Address :

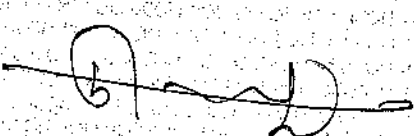
M/S. L & T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.
HAZIRA MANUFACTURING COMPLEX,
POST: BHATHA, DIST: SURAT, GUJARAT,
INDIA. PIN CODE - 394510

Test Report No. : **PL/LT 0114**
Issue Date : **29/09/2017**
Customer's Ref. : **W.O : FLS001153**
DTD:20.06.2017

Description of Sample : **ETP Sludge Sample** Quantity/No. of Samples : **02 Kg/One**
Date of Sampling : **07/09/2017** Sampling Procedure : **Grab**
Sampling By : **Pollucon Laboratories Pvt. Ltd.** Protocol (purpose) : **QC**
Sample Receipt Date : **08/09/2017** Lab ID : **LT/1709/12**
Packing/ Seal : **Sealed** Test Parameters : **As per table**
Date of Starting of Test : **08/09/2017** Date of Completion of Test : **19/09/2017**

TEST RESULT

SR. NO	TEST PARAMETERS	UNIT	RESULT
			ETP SLUDGE
1.	pH	--	7.79
2.	LOD	%	13.46
3.	SiO ₂	%	11.92
4.	Al ₂ O ₃	%	21.57
5.	Fe ₂ O ₃	%	33.37
6.	CaO	%	5.44
7.	MgO	%	5.58


H.T. Shah
Lab Manager


Dr. Arun Bajpai
Lab Manager (Q)

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ich Office : Plot No. 5/6, Pollucon House, Opp. Balaji Industrial Soc., Old Shantinath Silk Mill Lane, Navjivan Circle, Udhana Magdalla Road, Surat-3905007
Tele : (0261) 2635750, 2635751 E-mail : pollucon@gmail.com, Website : www.polluconlab.com

Annexure 8:

**Common Hazardous Waste Management
Facility Membership Certificate**



BHARUCH ENVIRO INFRASTRUCTURE LIMITED

Date 27/04/2012

To,
L & T Special Steels and Heavy Forgings Pvt. Ltd.
Hazira Manufacturing Complex,
Post: Bhadha,
Dist. Surat.

Sub : Membership Certificate for Common Solid Waste Disposal Facility.

Dear Sir,

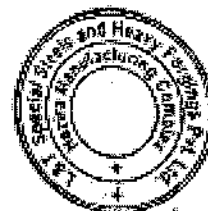
We hereby certify that you have become member for the common Solid/Hazardous waste disposal facility of Bharuch Enviro Infrastructure Ltd., at GIDC, Ankleshwar. You have booked solid waste quantity of 312 MT/year. You have also paid your capacity commitment charges. Your Membership No. is Oth/147.

Waste will be accepted after submitting valid authorization of GPCE.

Thanking you,

Yours faithfully,
For **BHARUCH ENVIRO INFRASTRUCTURE LTD.**


AUTHORISED SIGNATORY



Received
27/04/12




BHARUCH ENVIRO INFRASTRUCTURE LIMITED

DATE: 17/02/2012

L & T Special Steels and Heavy Forgings Pvt. Ltd.
Hazira Manufacturing Complex,
Post: Bhatha,
Dist. Surat.

Sub : Membership Certificate for Common Incineration Facility.

Dear Sir,

We hereby certify that you have become member for the common incineration facility of Bharuch Enviro Infrastructure Ltd., at GIDC, Ankleshwar. You have booked quantity of 21MTC/year. You have paid Registration fees for common incinerator membership. Your Membership No. is CHCCHM170.

Waste will be accepted after submitting valid authorization of GPCR.

Thanking you,

Yours faithfully,

For **BHARUCH ENVIRO INFRASTRUCTURE LTD.**

AUTHORISED SIGNATORY

Annexure 9:
CREP Compliance Report

Integrated Iron & Steel Industry	Not Applicable as Our unit is an integrated forging facility, not the integrated iron and Steel Industry.
1. Coke Oven Plants	Not applicable
2. Steel Melting Shop	
Reduction of fugitive emissions	Provision of efficient Fume Extraction System (FES) is there for entrapping fugitive emission and process emission. Analysis report for work area monitoring attached: Annexure-3.
3. Blast Furnace	Not applicable
4. Solid Waste /Hazardous Waste Management	
Utilization of Steel/ Melting shop (SMS) Slag.	Slag of Electrical Arc Furnace and Ladle Furnace is utilized as building material or other suitable application like road filling. It is non-hazardous in nature. Toxic Chemical Leach Potential Study Conducted, Analysis report attached: Annexure-7.
Hazardous Wastes	
- Charge of tar sludge/ ETP sludge to Coke Oven	Not applicable, no tar sludge or Coke Oven Plant. ETP Sludge (From WTP/ETP) is disposed to GPCB approved TSDF Facility.
- Inventorization of the Hazardous waste as per Hazardous Waste (M& H), Rules, 1989 as amended in 2000 and implementation of the Rules by Dec. 2003. (tar sludge, acid sludge, waste Lubricating oil and type fuel falls in the category of Hazardous waste).	Noted. Tar Sludge, Acid Sludge etc. – Not Applicable as ours is not an integrated iron and steel industry. Inventorization for applicable hazardous waste categories are in place.
5. Water Conservation/ Water Pollution	
- To reduce specific water consumption	Noted. Efficient steps are taken to reduce the specific water consumption, this includes recycling the cooling tower blow down, boiler blow down, reusing treated sewage etc.
- To operate the effluent treatment plant efficiently to achieve the notified effluent discharge standards	Noted and Confirmed. Analysis report attached: Annexure-5.
6. Installation of Continuous stack monitoring system & its calibration in major stacks and setting up of the online ambient air quality monitoring stations.	Noted and confirmed. Environment Monitoring Plan is in place for monitoring of stack and ambient air quality at regular interval through MoEF approved Laboratory. Online monitoring system for Stack and Ambient Air is also installed.
7. To operate the existing pollution control equipment efficiently and to keep proper record of run hours, failure time and efficiency with immediate effect.	Noted and confirmed.
8. To implement the recommendations of Life Cycle Assessment (LCA) study	Carbon Foot Print and Life Cycle Assessment Study carried out based on design data. The CFP data are being captured for Scope 1 & 2 on monthly basis.
9. The industry will initiate the steps to adopt the following clean technologies measures to improve the performance of industry towards production, energy land environment.	
- Energy recovery of top Blast Furnace (BF) gas.	NA, As no blast furnace in our case.
- Use of Tar- free runner linings.	NA
- De- dusting of Cast house at tap holes, runners, skimmers ladle and charging points.	Noted.
- Suppression of fugitive emissions using nitrogen gas or other inert gas	For raw material charging, closed conveyor belt system is provided to avoid the fugitive emission during raw material charging. For other escapes efficient Fume Extraction System is provided. within the plant.
- To study the possibility of slag and fly ash	Noted. Slag is utilized as building material or other

transportation back to the abandoned mines, to fill up the cavities through empty railway wagons while they return back to the mines and its implementation.	suitable application like road filling. It is non-hazardous in nature. Toxic Chemical Leach Potential Study Conducted, Analysis report attached: Annexure-7.
- Processing of the waste containing flux & ferrous wastes through waste recycling plant.	Noted.
- To implement rainwater harvesting	Noted and complied with.
- Reduction Green House Gases by :	
* Reduction in power consumption	Successfully Implemented ISO 50001 (Energy Management System) with a specific targets to reduce the energy consumption.
* Use of by-products gases for power generation	NA, Ours is not a continuous process. Exhaust gases from RH Furnace is utilised for VAM for cooling of Admin building.
* Promotion of Energy Optimization technology including energy/audit	Successfully Implemented ISO 50001 (Energy Management System) with a specific targets to reduce the energy consumption.
- To set targets for Resource Conservation such as Raw material, energy and water consumption to match International Standards.	Noted.
- Up-gradation in the monitoring and analysis facilities for air and water pollution. Also to impart elaborate training to the manpower so that realistic data is obtained in the environmental monitoring laboratories.	Noted. In-house Environment Lab is operational. Also third party monthly monitoring is also being carried out through MoEF approved laboratory & Schedule I Environment Auditor.
- To improve overall house keeping.	Noted.

Annexure 10:
Environment Clearance from MoEF, Dtd.
20-10-2009 and
Amendment Dtd. 23-05-2012 &
09-04-2013

Poplar Bluff
CFO - Jumper, Lehigh Road
New York - 10007

References: DAVIS, D. M. 1975.

^a The number of subjects who were included in each group was determined by the number of subjects who completed the study.

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

Figure 1. Schematic representation of the experimental design. The subjects were divided into two groups: a control group and an experimental group. The control group received a standard diet, while the experimental group received a diet supplemented with 10% of the total energy from fat. The subjects were then divided into two subgroups: a control subgroup and an experimental subgroup. The control subgroup received a standard diet, while the experimental subgroup received a diet supplemented with 10% of the total energy from fat. The subjects were then divided into two subgroups: a control subgroup and an experimental subgroup. The control subgroup received a standard diet, while the experimental subgroup received a diet supplemented with 10% of the total energy from fat.

Subject: Mr. JAMES E. HARRIS

100-443887-100

Supplier: Integrator Super Heavy Forge Shop to manufacture forgings (61,000 MTPA) and steel bolts & forgings (22,000 MTPA). Separated Steam Turbine & Generators (4 Integropac) and Boilers (3 Unicopac) at Survey No. 422A & 424H. Heavy, Order Super, supplied by Dr. Larsen & Tsurumi Ltd. - Enquiries also welcome.

[illegible]

100

This was referred to your letter of 16TH MARCH, which contains copies of the 1990 and 1991 United Nations Human Development Reports, and the 1992 and 1993 Human Development Reports. The 1992 and 1993 Human Development Reports are available for free download and are available for the 1994 and 1995 Human Development Reports.

[illegible]

21. During extraction operations in large plants, it will be possible to control particulate emissions from the furnaces by the use of the equipment to control the NO_x emissions. This system requires installation of a high-capacity waste supply process for the treatment of the NO_x gas. The technology from the pilot plant will be applied to the large-scale plant in the future. The NO_x gas will be used

1. The first step is to identify the key components of the system. This includes understanding the hardware, software, and data involved.

[illegible]

FD-302 (Rev. 1-25-60) (Continued)

4. DEFINITION SCOTCH :

10. The design of the proposed plant shall be such as to ensure that the effluent from the plant is discharged into the receiving water body in a manner which will not cause any pollution of the receiving water body. The design shall also take into account the need to provide for the disposal of sludge and other waste materials generated during the operation of the plant.
11. The design shall also take into account the need to provide for the disposal of sludge and other waste materials generated during the operation of the plant. The design shall also take into account the need to provide for the disposal of sludge and other waste materials generated during the operation of the plant.
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20. The design shall also take into account the need to provide for the disposal of sludge and other waste materials generated during the operation of the plant. The design shall also take into account the need to provide for the disposal of sludge and other waste materials generated during the operation of the plant.

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Total water requirement from existing crop plus water supply needed from 1965. Total shall not exceed 800,000 gals. For the water rights generated from the project that are located on the official national plan of 1972, followed by the National Domestic Policy Act and Executive Order issued in the project order was for such distribution. Distribution development and the various sources of the project will be allowed until the exchange with the project. All facilities shall be planned for they existing to make a new exchange. Water exchange shall be strictly regulated. Beyond conditions shall be completely treated in the project national plan (NAP) and subject to the national planning and used for great bulk development.

Other bandages for the repair of 2,100 mms. water for River Road shall be obtained from the concerned department and stored at the water works in accordance with the Regional Office of Montreal within 3 months of issue of the Engineering Ordinance.

[illegible]

As proposed, all the waste except the white and light gray will be recycled. Recycled in plastic are in fact. All the other materials are waste generated in many recent years. Garbage (G.D.) plant will be properly treated or disposed off in environment friendly manner. The garbage waste including sewage sludge shall be treated biologically and used as manure for green belt. Woodchips etc. shall be sold to authorized recyclers. As per the Hazardous Waste Management & Handling Rules, 1989 will be strictly implemented.

- iii) A detailed outline of the construction schedule shall be prepared and submitted to the Ministry of Environment and Forests.
- iv) Pollution control equipment and devices at all the units shall be designed and installed in accordance with the standards laid down in the schedule and the Ministry of Environment and Forests shall be informed of the Ministry of Environment and Forests and the Ministry of Health.
- v) Once the plant is established in 1981 and during the period of its operation the Ministry of Health shall be informed of the plant's progress and the Ministry of Health shall be informed of the plant's progress.
- vi) All the environmental measures in the Charter of Corporate Responsibility for Environment Protection (CERP) for the Steel Sector shall be implemented and progress report shall be submitted to MOEF/CRCE.
- vii) Proper care shall be taken in structural design to protect against corrosion of the equipment and structures and the implementation of the design shall be monitored.
- viii) The company shall provide training for construction workers within the site with the necessary instructions and facilities for working in a safe manner, mobile, safe, and working with proper health care, etc. The training may be in the form of temporary workers to be removed after the completion of the project.

B. GENERAL PROVISIONS:

- i) The project authorities shall strictly adhere to the regulations made by the Central Pollution Control Board (CPCB) and the State Government.
- ii) No further expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.
- iii) The National Ambient Air Quality Standards (NAAQS) and the standards prescribed by the Central Pollution Control Board (CPCB) shall be strictly followed during the construction and operation of the plant. The standards shall be followed in view of the nature of the industry and the surrounding area. At no time, the standards shall be exceeded beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the corrective measures shall not be taken until the control measures are satisfactorily restored to the desired efficiency.
- iv) At least four monitoring stations shall be established in the surrounding area as follows: where maximum ground level concentrations of SO_2 , CO , and NO_2 are anticipated in consultation with the State Pollution Control Board. Data on air quality and other emissions shall be regularly furnished to the Ministry including its Regional Office at Bhopal and the CPCB, CRCE also in its monthly.
- v) Industrial wastewater shall be properly collected, treated as per the standards in the schedule prescribed under CERP (COP 15) dated 10th May, 1983 and 31st December.

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED DATE 06-13-2001 BY 60322 UCBAW

[illegible][illegible][illegible]

161 The present proposal will also cover 10% of the current and projected
expenses for the year commencing in the 1950-1951 year and also the
portion thereof payable for the current year including expenditures
and interest payable in the current year which is payable in accordance
with the provisions of the present proposal.

[illegible]

4. Copy of the above letter to be sent to the press with a copy of the original and findings of the Commission. Use of the fact that the Commission is not bound by the findings of the Commission is not to be used in the press and the proposed 50% reduction in the number of the staff of the Commission is to be avoided.

[illegible][illegible]

The environmental impact for each proposed project shall be prepared as a statement to be submitted by the project proponent to the concerned State Pollution Control Board for clearance under the Environment Protection Rules, 1986. The cost of such study shall also be paid on the orders of the competent authority. The Board is empowered to recommend clearance and may also refer the matter to Regional Offices or the MPET, as the case may be.

After receipt of necessary clearance from the Regional Office as well as the Ministry, the cost of studies, studies and the approval of the project by the concerned authorities shall be borne by the proponent (holder of the license).

8.6. The Ministry may revoke or suspend the clearance if implementation of any of the above conditions is not satisfactory.

8.7. Any appeal against the order passed by the Ministry shall lie with the National Environment Appellate Authority, if preferred within a period of 90 days as prescribed under Section 11 of the National Environment Act, 1986.

8.8. The Ministry may have the right to impose additional conditions if found necessary. The licensee in a license shall comply with all such conditions.

8.9. The above provisions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1986, the Environment Protection Act, 1986, Hazardous Wastes (Management & Handling) Rules, 2008 and the Public (Prevention of Pollution) Act, 1981 along with the amendments and rules.

(M. P. B. Rastogi)

Director

Copy to:-

1. The Secretary, Government of India, Ministry of Environment & Forests, Civil Services Building, New Delhi.
2. The Chairman, Central Pollution Control Board, Parliament Building, Sector 10-A, Connaught Place - 110 048, New Delhi.
3. The Chief Controller of Pollutions, Ministry of Environment & Forests, Regional Office (W.P.C.B.), New Delhi - 110 002, New Delhi.
4. The Chairman, Central Pollution Control Board, Parliament Building, Sector 10-A, Connaught Place - 110 048, New Delhi.
5. Division of Environment and Forests, Parliament Building, C-60 Complex, New Delhi.
6. Monitoring Cell, Ministry of Environment and Forests, Parliament Building, C-60 Complex, New Delhi.
7. Guard File
8. Monitoring File
9. Record File

(M. P. B. Rastogi)

Director

[illegible]

1. What is the purpose of the study?

[illegible][illegible]

As shown in the attached report, the Bureau, with its own resources, has been unable to locate the person or persons who are responsible for the distribution of the above described material. The Bureau is continuing its efforts to locate the person or persons who are responsible for the distribution of the above described material.

The attached report is being submitted to the Bureau for its information.

Very respectfully,
J. Edgar Hoover
Director

1. The first step is to identify the problem. This involves understanding the situation and the goals that need to be achieved.

1. Mr. J. Edgar Hoover, Director, Federal Bureau of Investigation, Washington, D. C.

1. Improvement of existing procedures especially of opening of letters and
 examination of same, reduction of man hours for every letter
 received and forwarding and distribution of mail to the
 various departments and the various departments of the
 various departments of the various departments of the
 various departments of the various departments of the

[illegible][illegible][illegible]

After the completion of the above work, the project will be completed and the results will be reported to the appropriate authorities.

4. The following information is being provided for the project: The project will be completed and the results will be reported to the appropriate authorities. The project will be completed and the results will be reported to the appropriate authorities. The project will be completed and the results will be reported to the appropriate authorities.

5. The following information is being provided for the project: The project will be completed and the results will be reported to the appropriate authorities. The project will be completed and the results will be reported to the appropriate authorities. The project will be completed and the results will be reported to the appropriate authorities.

N. No.	Particulars	Existing Quantity	Quantity to be supplied
1	Concrete	20000 M ³	20000 M ³
2	Steel Reinforcement Bars	20000 M ³	20000 M ³
3	Gravel	20000 M ³	20000 M ³
4	Water	20000 M ³	20000 M ³
5	Electricity	20000 M ³	20000 M ³

6. The following information is being provided for the project: The project will be completed and the results will be reported to the appropriate authorities. The project will be completed and the results will be reported to the appropriate authorities. The project will be completed and the results will be reported to the appropriate authorities.

N. No.	Particulars	Existing Quantity	Quantity to be supplied
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3	Gravel	20000 M ³	20000 M ³
4	Water	20000 M ³	20000 M ³
5	Electricity	20000 M ³	20000 M ³

The Minister of Education has approved the proposal for the establishment of a Technical Education Board, which will be responsible for the coordination and supervision of technical education in the country. The Board will be composed of representatives from the Ministry of Education, the Ministry of Labour, and the private sector. Its main functions will be to develop and implement policies and programs for technical education, to monitor and evaluate the performance of technical institutions, and to provide financial and administrative support to these institutions. The Board will also be responsible for the recruitment and training of technical teachers and for the development of technical curricula.

The Board will be established as a statutory body, with a legal personality and the power to enter into contracts and to acquire and dispose of property. It will be financed by the Government and by contributions from the private sector. The Board will be required to submit an annual report to the Minister of Education, detailing its activities and financial position.

The Minister of Education has also approved the proposal for the establishment of a Technical Education Fund, which will be used to provide financial support to technical institutions. The Fund will be financed by the Government and by contributions from the private sector. It will be managed by the Board and will be used to provide grants and loans to technical institutions for the purchase of equipment, the recruitment of teachers, and the development of curricula.

The Minister of Education has also approved the proposal for the establishment of a Technical Education Council, which will be responsible for the coordination and supervision of technical education in the country. The Council will be composed of representatives from the Ministry of Education, the Ministry of Labour, and the private sector. Its main functions will be to develop and implement policies and programs for technical education, to monitor and evaluate the performance of technical institutions, and to provide financial and administrative support to these institutions. The Council will also be responsible for the recruitment and training of technical teachers and for the development of technical curricula.

A. SPECIFIC CONDITIONS

1. The project shall be carried out in accordance with the conditions set out in the project agreement between the Government and the private sector.
2. The project shall be carried out in accordance with the conditions set out in the project agreement between the Government and the private sector.
3. The project shall be carried out in accordance with the conditions set out in the project agreement between the Government and the private sector.
4. The project shall be carried out in accordance with the conditions set out in the project agreement between the Government and the private sector.
5. The project shall be carried out in accordance with the conditions set out in the project agreement between the Government and the private sector.

1. The first step is to identify the problem. This involves understanding the current situation and the goals that need to be achieved. It is important to gather all relevant information and to define the scope of the problem.

1. The Commission has received information from the Department of the Interior, Bureau of Land Management, that the Bureau is currently conducting a study of the feasibility of establishing a National System of Public Lands. The Commission is interested in the results of this study and in the Bureau's recommendations regarding the establishment of such a system.

The following information was obtained from the records of the Department of the Interior, Bureau of Land Management, regarding the land owned by the United States in the State of Nevada:

[illegible]

1. The first of these is the fact that the United States has a large and growing population of people who are not citizens of the United States. This is a result of the large number of people who have immigrated to the United States in recent years, and the fact that many of these people are not citizens of the United States.

On 10/10/54, the U.S. Navy's "USS T-37" (a minesweeper) was in the area of the shipwreck. The ship was on a mission to sweep the area for mines. The ship's crew reported seeing a large, dark, rectangular object in the water. The object was about 100 feet long and 50 feet wide. It was floating on the surface of the water. The ship's crew was unable to identify the object. The object was later identified as the shipwreck of the "USS T-37".

1. 1974-1975 1976-1977 1978-1979 1980-1981 1982-1983 1984-1985 1986-1987 1988-1989 1990-1991 1992-1993 1994-1995 1996-1997 1998-1999 2000-2001 2002-2003 2004-2005 2006-2007 2008-2009 2010-2011 2012-2013 2014-2015 2016-2017 2018-2019 2020-2021 2022-2023 2024-2025 2026-2027 2028-2029 2030-2031 2032-2033 2034-2035 2036-2037 2038-2039 2040-2041 2042-2043 2044-2045 2046-2047 2048-2049 2050-2051 2052-2053 2054-2055 2056-2057 2058-2059 2060-2061 2062-2063 2064-2065 2066-2067 2068-2069 2070-2071 2072-2073 2074-2075 2076-2077 2078-2079 2080-2081 2082-2083 2084-2085 2086-2087 2088-2089 2090-2091 2092-2093 2094-2095 2096-2097 2098-2099 2100-2101 2102-2103 2104-2105 2106-2107 2108-2109 2110-2111 2112-2113 2114-2115 2116-2117 2118-2119 2120-2121 2122-2123 2124-2125 2126-2127 2128-2129 2130-2131 2132-2133 2134-2135 2136-2137 2138-2139 2140-2141 2142-2143 2144-2145 2146-2147 2148-2149 2150-2151 2152-2153 2154-2155 2156-2157 2158-2159 2160-2161 2162-2163 2164-2165 2166-2167 2168-2169 2170-2171 2172-2173 2174-2175 2176-2177 2178-2179 2180-2181 2182-2183 2184-2185 2186-2187 2188-2189 2190-2191 2192-2193 2194-2195 2196-2197 2198-2199 2200-2201 2202-2203 2204-2205 2206-2207 2208-2209 2210-2211 2212-2213 2214-2215 2216-2217 2218-2219 2220-2221 2222-2223 2224-2225 2226-2227 2228-2229 2230-2231 2232-2233 2234-2235 2236-2237 2238-2239 2240-2241 2242-2243 2244-2245 2246-2247 2248-2249 2250-2251 2252-2253 2254-2255 2256-2257 2258-2259 2260-2261 2262-2263 2264-2265 2266-2267 2268-2269 2270-2271 2272-2273 2274-2275 2276-2277 2278-2279 2280-2281 2282-2283 2284-2285 2286-2287 2288-2289 2290-2291 2292-2293 2294-2295 2296-2297 2298-2299 2300-2301 2302-2303 2304-2305 2306-2307 2308-2309 2310-2311 2312-2313 2314-2315 2316-2317 2318-2319 2320-2321 2322-2323 2324-2325 2326-2327 2328-2329 2330-2331 2332-2333 2334-2335 2336-2337 2338-2339 2340-2341 2342-2343 2344-2345 2346-2347 2348-2349 2350-2351 2352-2353 2354-2355 2356-2357 2358-2359 2360-2361 2362-2363 2364-2365 2366-2367 2368-2369 2370-2371 2372-2373 2374-2375 2376-2377 2378-2379 2380-2381 2382-2383 2384-2385 2386-2387 2388-2389 2390-2391 2392-2393 2394-2395 2396-2397 2398-2399 2400-2401 2402-2403 2404-2405 2406-2407 2408-2409 2410-2411 2412-2413 2414-2415 2416-2417 2418-2419 2420-2421 2422-2423 2424-2425 2426-2427 2428-2429 2430-2431 2432-2433 2434-2435 2436-2437 2438-2439 2440-2441 2442-2443 2444-2445 2446-2447 2448-2449 2450-2451 2452-2453 2454-2455 2456-2457 2458-2459 2460-2461 2462-2463 2464-2465 2466-2467 2468-2469 2470-2471 2472-2473 2474-2475 2476-2477 2478-2479 2480-2481 2482-2483 2484-2485 2486-2487 2488-2489 2490-2491 2492-2493 2494-2495 2496-2497 2498-2499 2500-2501 2502-2503 2504-2505 2506-2507 2508-2509 2510-2511 2512-2513 2514-2515 2516-2517 2518-2519

The United States and the United Kingdom have agreed to provide the United Nations with the necessary resources to carry out its mandate.

the United States for armed conflict to the place and to return on which
the Republic of the United States of America, United and the other

As the fishery continues to develop, a further effort should be established in the Government planning to build up where necessary, to control the fishery resources of the F.M.S. and to ensure that the fishery is managed in a sustainable manner. The fishery should be managed in a sustainable manner, and the fishery should be managed in a sustainable manner.

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7. The ... of the ...

...the ... of the ...

• 63. Nennen Sie die drei Folgen:

[illegible]

Det. 10/14/81, 12/30/81, 17962

Phone: 214-393-2545

[illegible]

[Faint, illegible text at the bottom of the page]

Project: Environmental Impact of Environmental Cleanup Work in Support of Project 10
April 2016 - September 2016

[illegible]

With reference to above captioned report, we would like to inform hereby our compliance regarding Enclosure-2 (Annexure) list of the classified Periodicals available, mentioned below.

- Environment Clearance (EC) from Ministry of Environment and Forest, Dtd. 26-10-2009. (Annexure-10)
- No Objection Certificate (Consent to Establish) from Gujarat Pollution Control Board (GPCB), No. GK/28/CE/ECT-712/2009 Dtd. 20-04-2010. (Annexure-11)
- STC (Consent to Operate) from GPCB, No. AUM-60306, Dtd. 05-08-2010. (Annexure-12)
- Amended Environment Clearance from MoEF, Dtd. 23-05-2012, and 09-01-2013 and 23-11-2015. (Annexure-10)
- Amended CTC from GPCB, Dtd. 01-03-2014. (Annexure-12)

CONFIDENTIAL REPORT FOR PERSON IDENTIFIED AS IS PROVIDED HEREIN. THIS REPORT IS NOT TO BE RELEASED TO THE PUBLIC OR TO ANY OTHER PERSON WITHOUT THE WRITTEN CONSENT OF THE FBI.

For LET SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.

NATIONAL ASSOCIATION OF BROADCASTERS
 1100 15th St., N.W.
 Washington, D.C. 20004-4242
 (202) 462-2700
 FAX (202) 462-2700
 E-MAIL: membership@nab.org
 WWW: www.nab.org

[illegible][illegible]

THE NEW YORK PUBLIC LIBRARY

Can be

1. The Tropical Grills, Banjaran Puluhan, Central Board, Tropical Office, 120, Selegie Street, Opp. Linear For Sand, King Road, Seret, Culorai.
2. The Zonal Office, Central Puluhan Central Board, Baruchan Buvor, Opp. WTI, Wain, inside No. 31, Seret and the, Vudavara - 120 120. Phone No. 2265 226665

1. 1990年12月15日，在北京市召开的“中国城市经济体制改革十年回顾与展望”会议上，江泽民同志在讲话中提出：“建立社会主义市场经济体制，就是要使市场在国家宏观调控下对资源配置起基础性作用。为此，必须深刻认识和把握市场经济的一般规律，按照市场经济的要求，改革和完善所有制结构、分配制度、企业制度、市场体系、宏观调控体系、法律体系、社会保障制度、对外经济关系等各方面的制度，使社会主义市场经济体制真正建立起来。”

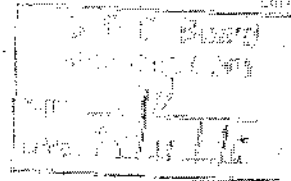


LETTER OF NO OBJECTION
FOR EXPORT OF
STEEL PRODUCTS
TO INDIA
DATE: 11/11/2016
BY: 11/11/2016

LETTER OF NO OBJECTION FOR EXPORT

DATE: 11/11/2016

To,
Regional Office, Western,
Ministry of Environment & Forest,
101, B-1, 1st Floor, 1st Wing,
L&T, 4-1052, L&T



From: Environmental Clearance No. 7 for 133011/133/2009-14-01 (I) and 2010 October 2010, Amended dated 2011-12, 2012-13, 2013-14, 2014-15, 2015-16

Subject: Environmental Clearance issued by MoEF for the period of April 2016 - September 2016.

Re: (a)

With reference to above subject, we would like to request you to kindly provide the following information for Environmental Clearance, one of the documents / Permits, and other mentioned below:

- Environmental Clearance (EC) from Ministry of Environment and Forest, dated 23-10-2009. (Annexure-10)
- No Objection Certificate (Consent to Establish) from Gujarat Pollution Control Board (GPCB), No. GPCB/CE/SO-2125/40324 Dtd. 20-01-2010. (Annexure-11)
- CTO (Consent to Operate) from GPCB, No. GPCB/CO/SO-2125/40324 Dtd. 20-01-2010. (Annexure-12)
- Amended Environmental Clearance from MoEF, Dtd. 23-10-2009, 2011-12, 2012-13, 2013-14, 2014-15, 2015-16. (Annexure-10)
- Amended CTO from GPCB, Dtd. 23-10-2009. (Annexure-12)

Compliance report for above mentioned EC to enclosed along with above mentioned status report to L&T with your requirement.

Thanking you,

For L&T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.

Authorized Signature

Signature of Mr. (Name)

Copy to:

1. The Regional Office, Gujarat Pollution Control Board, Regional Office, 230, Belapur South, Opp. Minor Bus Stand, Ring Road, Surat, Gujarat.
2. The Zonal Office, Gujarat Pollution Control Board, Barwadih Buzurg, Opp. W&A Ward Office No. 11, Subhanpura, Vadodra - 390 021, Phone No. 0265 2332105

For L&T SPECIAL STEELS AND HEAVY FORGINGS PVT. LTD.

Signature of Mr. (Name)

Annexure 11:

Consent to Establish (CTE) from GPCB No.

GPCB/CE/SRT-2129/49334,

Dtd. 20-04-2010



GUJARAT POLLUTION CONTROL BOARD

PARYAVARAN BHAVAN

Sector-10-A, Gandhinagar 382 010

Phone : (079) 23222425

(079) 23232152

Fax : (079) 23232156

Website : www.gpcb.gov.in

By R.P.A.D

In exercise of the power conferred under section-25 of the Water (Prevention and Control of Pollution) Act-1974, under section-21 of the Air (Prevention and Control of Pollution)-1981 and Authorization under rule 3(c) & 5(5) of the Hazardous Waste (Management and Handling & Trans boundary Movement) Rules'2008 framed under the Environmental (Protection) Act-1986. This Board is empowered to Grant CC&A.

And whereas Board has received consolidated consent application letter no. 122554 dated 23/05/2017 for the Renewal of Consolidated Consent and Authorization (CC & A) of this Board under the provisions / rules of the aforesaid Acts. Consents & Authorization are hereby granted as under:

CONSENTS AND AUTHORISATION:

(Under the provisions /rules of the aforesaid environmental acts)

To,

M/s. L&T Special Steels And Heavy Forgings Pvt.Ltd.

Plot No:- Hazira Manufacturing Complex,

S.No:- 446/A, 498/1, Surat-Hazira Road,

Hazira Notified area, Bhatha:- 394510,

Tal:- Chorasi, Dist:- Surat.

1. Consent Order No. AWH-87212 Date of issue: 20/07/2017.
2. The consents shall be valid upto 22/05/2022 for the use of outlet for the discharge of treated effluent and emission due to operation of industrial plant for manufacturing of the following items/ products:

Sr. No.	Product	Quantity
1	Forgings	60,000 MT/Annum
2	Steel Ingots, Casting & Liquid Metal	80,000 MT/Annum

Subject to specific condition:

1. Unit shall manufacturing only products which are mentioned in CTE & EC, unit shall not manufacture Liquid metal as Product.
2. Unit shall strictly follow conditions stipulated in EC issued order F.no. J-11011/193/2009-I-A-II, dated:- 20/10/2009 & its amendment order dated:- 23/05/2012.
3. Industry shall manage Solid Wastes generated from industrial activities as per Solid Waste Management Rules-2016 (solid waste as defined in Rule-3(46)).
4. As per Provisions of Rule 18 of Solid Waste Management Rules-2016 you are directed to make an arrangement in Utilities to replace at least five percent (5%) of your solid fuel requirement by 'refused derived fuel', if applicable.
5. Industry shall obtain NOC from CGWA as per order of Hon. National Green Tribunal for the withdrawal of ground water, if applicable.

Clean Gujarat Green Gujarat

ISO-9001-2008 & ISO-14001 - 2004 Certified Organisation

3. CONDITIONS UNDER THE WATER ACT:

- 3.1. Source of Water:- Singapore weir through existing water pipeline.
- 3.2. The quantity of the fresh water consumption for industrial purpose shall not exceed 8886 KL/Day.
- 3.3. The quantity of the fresh water consumption for domestic purpose shall not exceed 100 KL/Day.
- 3.4. The quantity of the industrial effluent to be generated from the manufacturing process and other ancillary industrial operations shall not exceed 2409 KL/Day.
- 3.5. There shall be no discharge of industrial waste water. The effluent shall be treated into ETP and RO Plant, RO permeate shall re-used and RO reject (570 KL/day) shall be used for Cooling of hot slag in SMS to maintain the Zero liquid discharge at all time.
- 3.6. Industry shall provide fixed pipeline with flow meter for the reuse of treated effluent (RO permeate) and RO reject and maintain its records, separately, at Site.
- 3.7. The applicant shall operate effluent treatment system efficiently so that treated effluent from the industrial unit shall conform to the norms mentioned below.

PARAMETERS	CETP INLET NORMS
PH	6.5 TO 8.5
Temperature	40° C
Colour (pt.co.scale) in units	100 units
Suspended Solids	100 mg/l
Oil and Grease	10 mg/l
Sulphate	1000 mg/l
Phenolic Compounds	1 mg/l
Sulphides	2 mg/l
Ammonical Nitrogen	50 mg/l
Total Chromium	2 mg/l
Hexavalent Chromium	0.1 mg/l
BOD (5 days at 20°C)	30 mg/l
COD	100 mg/l
Total Dissolved Solids	2100 mg/l
Percent Sodium	60 %

- 3.8. The quantity of domestic waste water shall not exceed 80 KL/Day.
- 3.9. Domestic waste water shall be treated into STP consist of primary, secondary & tertiary treatment system. Treated Sewage conforming to the following standards shall be used for gardening & plantation within premises only:

BOD (5 days at 20°C)	Less than 20 mg/l
Suspending Solids	Less than 30 mg/l
Residual Chlorine	Minimum 0.5 mg/l

- 3.10. Industry shall also provide fixed pipeline network for even distribution of treated Sewage onland for plantation.
- 3.11. The applicant shall provide storage tank of adequate capacity to store treated sewage during rainy season for at latest 7 days.



4. **CONDITIONS UNDER THE AIR ACT:**

- 4.1. The following shall be used as a fuel in Electric arc furnace, Ladle refining furnace and, Reheating furnace (8 nos), Heat treatment furnace (8 nos), Natural gas based boiler (2 nos) and D.G. Set respectively.

Sr. No.	Utility	Fuel	Quantity
1	Electric Arc Furnace (100 MT)	Electricity	NA
2	Ladle refining furnace (100 MT)		
3	Reheating furnace-1 (250 MT)	Natural Gas	28350 NM ³ /hr
4	Reheating furnace-2 (300 MT)		
5	Reheating furnace-3 (400 MT)		
6	Reheating furnace-4 (400 MT)		
7	Reheating furnace-5 (400 MT)		
8	Reheating furnace-6 (600 MT)		
9	Reheating furnace-7 (600 MT)		
10	Reheating furnace-8 (800 MT)		
11	Heat treatment furnace-1 (250 MT)		
12	Heat treatment furnace-2 (400 MT)		
13	Heat treatment furnace-3 (400 MT)		
14	Heat treatment furnace-4 (600 MT)		
15	Heat treatment furnace-5 (400 MT)		
16	Heat treatment furnace-6 (300 MT)		
17	Heat treatment furnace-7 (600 MT)		
18	Heat treatment furnace-8 (800 MT)		
19	Natural gas based boiler-1 (30 TPH)		
20	Natural gas based boiler-2 (34 TPH)		
21	D.G. Sets 3 nos (1010 KVA × 3)	High Speed Diesel	600 lit/hr
22	D.G. Set 1 nos (750 KVA)	High Speed Diesel	100 lit/hr
23	D.G. Set 1 nos (250 KVA)	High Speed Diesel	50 lit/hr

- 4.2. The applicant shall install & operate comprehensive adequate air pollution control system in order to achieve prescribed norms.
- 4.3. The flue gas emission through stack attached to Electric arc furnace, Ladle refining furnace and, Reheating furnace (8 nos), Heat treatment furnace (8 nos), Natural gas based boiler (2 nos) and D.G. Set shall conform to the following standards:

Stack No.	Stack attached to	Stack height in Meter	Air Pollution Control System	Parameters	Permissible Limit
1	Electric Arc Furnace (100 MT)	50	Fume extraction system & bag filter house	PM SO ₂ NO _x	150 mg/NM ³ 100 ppm 50 ppm
2	Ladle refining furnace (100 MT)				
3	Reheating furnace-1 (250 MT)	35		PM SO ₂ NO _x	150 mg/NM ³ 100 ppm 50 ppm
4	Reheating furnace-2 (300 MT)				
5	Reheating furnace-3	35		PM	150 mg/NM ³

Cre

	(400 MT)			SO ₂ NO _x	100 ppm 50 ppm
6	Reheating furnace-4 (400 MT)				
7	Reheating furnace-5 (400 MT)				
8	Reheating furnace-6 (600 MT)				
9	Reheating furnace-7 (600 MT)	35		PM SO ₂ NO _x	150 mg/NM ³ 100 ppm 50 ppm
10	Reheating furnace-8 (800 MT)				
11	Heat treatment furnace-1 (250 MT)	35		PM SO ₂ NO _x	150 mg/NM ³ 100 ppm 50 ppm
12	Heat treatment furnace-2 (400 MT)				
13	Heat treatment furnace-3 (400 MT)				
14	Heat treatment furnace-4 (600 MT)				
15	Heat treatment furnace-5 (400 MT)	35		PM SO ₂ NO _x	150 mg/NM ³ 100 ppm 50 ppm
16	Heat treatment furnace-6 (300 MT)				
17	Heat treatment furnace-7 (600 MT)				
18	Heat treatment furnace-8 (800 MT)				
19	Natural gas based boiler-1(30 TPH)	45		PM SO ₂ NO _x	150 mg/NM ³ 100 ppm 50 ppm
20	Natural gas based boiler-2(34 TPH)				
21	D.G.Sets 3 nos (1010 KVA × 3) Stand by	11		PM SO ₂ NO _x	150 mg/NM ³ 100 ppm 50 ppm
22	D.G.Set 1 nos (750 KVA) Stand by	11			
23	D.G.Set 1 nos(250 KVA) Stand by	11			

4.4. The process emission through the stack attached to the Shot Blasting Unit shall conform to the following standards:

Stack No.	Stack attached to	Stack height in Meter	Air Pollution Control System	Parameters	Permissible Limit
1	Shot Blasting Unit	15	Bag filter	PM	150 mg/NM ³

4.5. The concentration of the following parameters in the ambient air within the premises of the industry and a distance of 10meters from the source) other than the stack/vent) shall not exceed the following levels.

PARAMETERS	PERMISSIBLE LIMIT
PM 10	100 Microgram/M3
PM 2.5	60 Microgram/M3
SO ₂	80 Microgram/M3
NO _x	80 Microgram/M3

- 4.6. The applicant shall provide portholes, ladder, platform etc at chimney(s) for monitoring the air emissions and the same shall be open for inspection to/and for use of Board's staff. The chimney(s) vents attached to various sources of emission shall be designed by numbers such as S-1, S-2, etc. and these shall be painted/displayed to facilitate identification.
- 4.7. The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standards in respect of noise to less than 75dB(A) during day time and 70 dB (A) during night time. Daytime is reckoned in between 6a.m. and 10 p.m. and nighttime is reckoned between 10 p.m. and 6 a.m.

5. D.G. SETS CONDITIONS

The D.G. Set shall have acoustic enclosure and shall comply with the standards specified at Sr. no. 95 of Schedule-I of the rule-3 of E.P. Rules -1986 and Noise pollution level as per the Air Act-1981.

D.G. Sets standards:-

The flue gas emission through stack attached to D.G. Sets shall conform to the following standards.

- The minimum height of stack to be provided with each of the generator set shall be $H = h + 0.2 (KVA)^{1/2}$, where H= Total stack height in meter, h= height of the building in meters where or by the side of which the generator set is installed.
- Noise from DG set shall be controlled by providing an acoustic enclosure or by treating the room acoustically, at the users end.
- The acoustic enclosure or acoustic treatment of the room shall be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on the higher side (if the actual ambient noise is on the higher side, it may not be possible to check the performance of the acoustic enclosure/ acoustic treatment. Under such circumstances the performance may be checked for noise reduction up to actual ambient noise level, preferably, in the night time). The measurement for insertion loss may be done at different points at 0.5 m from the acoustic enclosure/room, and the averaged.
- The D.G. Set shall be provided with proper exhaust muffler with insertion loss of minimum 25 dB (A).
- All efforts shall be made to bring down the noise level due to the D.G.Set, outside the premises, within the ambient noise requirements by proper siting and control measures.
- Installation of a D.G. Sets must be strictly in compliance with the recommendations of the D.G.Set manufacturer.
- A proper routine and preventive maintenance procedure for the D.G.Set should be set and followed in consultation with the DG Set manufacture which would help prevent noise levels of the DG Set from deteriorating with use.

6. AUTHORIZATION as per HAZARDOUS AND OTHER WASTE (MANAGEMENT AND TRANSBOUNDARY) RULES, 2016 Form-2 [See rule 6 (2)]

Form for grant of authorization for occupier or operator handling Hazardous waste

6.1 Authorization order No:- AWH-87212 date of Issue: 20/07/2017.

6.2 M/s. L&T special Steels And Heavy Forgings Pvt.Ltd. is hereby granted an authorization to operate facility for following hazardous wastes on the premises situated at Plot No:- Hazira Manufacturing Complex, S.No:- 446/A, 498/1, Surat-Hazira Road, Hazira Notified area, Bhatha:- 394510, Tal:- Chorasi, Dist:- Surat.

Sr. No.	Waste	Quantity MT/Year	Schedule-I/ Category	Facility
1	ETP Waste	1000	35.3	Collection, Storage, Transportation and disposal at GPCB authorized TSDF Site.

[Signature]

2	Used Oil	6	5.1	Collection, storage, transportation and disposal by selling to Registered re-refiners.
3	Discarded Containers/ Barrels/Liners	500	33.1	Collection, storage transportation and disposal to authorized decontaminator
4	Dried left over paint (Paint Residue)	1	21.1	Collection, Storage, Transportation and disposal by Incineration at approved CHWI facility.
5	Maintenance waste containing oil/waste oil	20	5.2	

6.3 The authorization shall be valid up to 22/05/2022.

6.4 The authorization is subject to the conditions stated below and such other conditions as may be specified in the rules from time to time under the Environment (Protection) Act-1986.

6.5 The authorization is granted to operate a facility for collection, storage within factory premises transportation and ultimate disposal of Hazardous wastes as per condition no.6.2 to the industry having valid CCA of this Board.

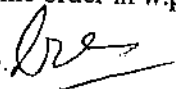
7. TERMS AND CONDITIONS OF AUTHORISATION

1. The applicant shall comply with the provisions of the Environment (Protection) Act-1986 and the rules made there under.
2. The authorization or its renewal shall be produced for inspection at the request of an officer authorized by the Gujarat Pollution Control Board.
3. The persons authorized shall not rent, lend, sell, and transfer or otherwise transport the hazardous wastes without obtaining prior permission of the Gujarat Pollution Control Board.
4. Any unauthorized change in personnel, equipment or working conditions as mentioned in the authorization order by the persons authorized shall constitute a breach of this authorization.
5. The person authorized shall implement Emergency Response Procedure (ERP) for which this authorization is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time;
6. The person authorized shall comply with the provisions outlined in the Central Pollution Control Board guidelines on "Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Wastes and Penalty"
7. It is the duty of the authorized person to take prior permission of the Gujarat Pollution Control Board to close down the facility.
8. An application for the renewal of an authorization shall be made as laid down in rules 6(2) under Hazardous Waste and Other Waste Rules, 2016.
9. The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.
10. The record of consumption and fate of the imported hazardous and other wastes shall be maintained.
11. The hazardous and other wastes which gets generated during recycling or reuse or recovery or pre-processing or utilization of imported hazardous or other wastes shall be treated and disposed of as per specific conditions of authorization.
12. The importer or exporter shall bear the cost of import or export and mitigation of damages if any.
13. Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.

14. The waste generator shall be totally responsible for (i.e. collection, storage, transportation and ultimate disposal) the wastes generated.
15. Records of waste generation, its management and annual return shall be submitted to Gujarat Pollution Control Board in Form-4 by 30th day of June of every year for the preceding period April to March.
16. In case of any accident, details of the same shall be submitted on Form-11 to Gujarat Pollution Control Board.
17. As per "Public Liability Insurance Act-91" company shall get Insurance Policy, if applicable.
18. Empty drums and containers of toxic and hazard material shall be treated as per guideline published for "Management & Handling of discarded containers". Records of the same shall be maintained and forwarded to Gujarat Pollution Control Board regularly.
19. In case of transport of hazardous wastes to a facility for (i.e. treatment, storage and disposal) existing in a State other than the State where hazardous wastes are generated, the occupier shall obtain 'No Objection Certificate' from the State Pollution Control Board or Committee of the concerned State of Union Territory Administration where the facility exists.
20. Unit shall take all concrete measures to show tangible results in waste generation, reduction, avoidance, reuse and recycle. Actions taken in this regard shall be submitted within three months and also along with Form-4.
21. Industry shall have to display the relevant information with regards to hazardous waste as indicated in the Hon. Supreme Court's Order in W.P. No.657 of 1995 dated 14th October, 2003.
22. Industry shall have to display on-line data outside the main factory gate with regard to quantity and nature of hazardous chemicals being handled in the plant, including wastewater and air emissions and solid hazardous wastes generated within the factory premises.

8. GENERAL CONDITIONS: -

- 8.1. Any change in personnel, equipment or working conditions as mentioned in the consents form/order should immediately be intimated to this Board.
- 8.2. Applicant shall also comply with the general conditions given in annexure I.
- 8.3. Whenever due to accident or other unforeseen act or ever, such emissions occur or is apprehended to occur in excess of standards laid down such information shall be forthwith reported to Board, concerned Police Station, Office of Directorate of Health Service, Department of Explosives, Inspectorate of Factories and local body.
- 8.4. In case of failure of pollution control equipments, the production process connected to it shall be stopped. Remedial actions/measures shall be implemented immediately to bring entire situation normal.
- 8.5. The Environmental Management Unit/Cell shall be setup to ensure implementation on and monitoring of environmental safeguards and other conditions stipulated by statutory authorities. The Environmental Management Cell/Unit shall directly report to the Chief Executive of the organization and shall work as a focal point for internalizing environmental issues. These cells/units also coordinate the exercise of environmental audit and preparation of environmental statements.
- 8.6. The Environmental audit shall be carried out yearly and the environmental statements pertaining to the previous year shall be submitting to this State Board latest by 30th September every year.
- 8.7. The Board reserves the right to review and/or revoke the consent and/or make variations in the conditions, which the Board deems, fit in accordance with Section 27 of the Act.
- 8.8. In case of change of ownership/management the name and address of the new owners/ partners/directors/proprietor should immediately be intimated to the Board.
- 8.9. Industry shall have to display the relevant information with regard to hazardous waste as indicated in the Hon. Supreme order in w.p. no. 657 of 1995 dated 14th October 2003.



9. **SPECIFIC CONDITIONS:-**

- 9.1. The authorized actual user of hazardous and other wastes shall maintain records of hazardous and other wastes purchased in a passbook issued by the State Pollution Control Board along with the authorization.
- 9.2. Handling over of the hazardous and other wastes to the authorized actual user shall be only after making the entry in the passbook of the actual user.
- 9.3. In case of renewal of authorization, a self-certified compliance report in respect of effluent, emission standards and the conditions specified in the authorization for hazardous and other wastes shall be submitted to SPCB.
- 9.4. The occupier of the facility shall comply Standard operating procedure/guidelines published by MOEF&CC or CPCB or GPCB from time to time.
- 9.5. Unit shall comply provisions of E-Waste Management Rules-2016.
- 9.6. The disposal of Hazardous Waste shall be carried out as per the waste Management hierarchy.
- 9.7. The occupiers of facilities shall not store the hazardous and other wastes for a period not exceeding ninety days. Prior permission of the Board shall be obtained for extension of the storage period.
- 9.8. The occupier shall maintain the records of generation, sale, storage, transport, recycling, co processing and disposal of hazardous waste and make available during the inspection.
- 9.9. The transportation of the hazardous waste shall be carried out in GPS mounted dedicated vehicles.

For and on behalf of
Gujarat Pollution Control Board


(Smt U.K. Upadhyay)
Environmental Engineer

NO: GPCB/CCA-SRT-1323(2)/ID-20924/ 421213

Date:- 23/8/12

Issued to:

M/s. L&T special Steels And Heavy Forgings Pvt.Ltd.

Plot No:- Hazira Manufacturing Complex,

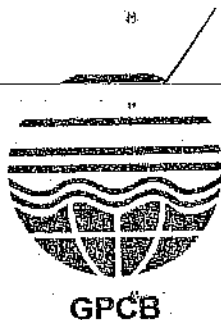
S.No:- 446/A, 498/1, Surat-Hazira Road,

Hazira Notified area, Bhatha:- 394510,

Tal:- Chorasi, Dist:- Surat.

Annexure 12:

**CTO (Consent to Operate) No. AWH-49308
from GPCB, Dtd. 05-09-2012**



GUJARAT POLLUTION CONTROL BOARD

PARYAVARAN BHAVAN

Sector-10-A, Gandhinagar 382 010

Phone : (079) 23222425

(079) 23232152

Fax : (079) 23232156

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By R.P.A.D

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- 3.11. The applicant shall provide storage tank of adequate capacity to store treated sewage during rainy season for at latest 7 days.



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23	D.G.Set 1 nos(250 KVA)	High Speed Diesel	100 lit/hr
		High Speed Diesel	50 lit/hr

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1	Electric Arc Furnace (100 MT)	50	Fume extraction system & bag filter house	PM SO ₂ NO _x	150 mg/NM ³ 100 ppm 50 ppm
2	Ladle refining furnace (100 MT)		-----		
3	Reheating furnace-1 (250 MT)	35		PM SO ₂ NO _x	150 mg/NM ³ 100 ppm 50 ppm
4	Reheating furnace-2 (300 MT)				
5	Reheating furnace-3	35		PM	150 mg/NM ³

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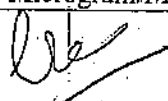
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16	Heat treatment furnace-6 (300 MT)				
17	Heat treatment furnace-7 (600 MT)				
18	Heat treatment furnace-8 (800 MT)				
19	Natural gas based boiler-1(30 TPH)	45		PM SO ₂ NO _x	150 mg/NM ³ 100 ppm 50 ppm
20	Natural gas based boiler-2(34 TPH)				
21	D.G.Sets 3 nos (1010 KVA × 3) Stand by	11		PM SO ₂ NO _x	150 mg/NM ³ 100 ppm 50 ppm
22	D.G.Set 1 nos (750 KVA) Stand by	11			
23	D.G.Set 1 nos(250 KVA) Stand by	11			

4.4. The process emission through the stack attached to the Shot Blasting Unit shall conform to the following standards:

Stack No.	Stack attached to	Stack height in Meter	Air Pollution Control System	Parameters	Permissible Limit
1	Shot Blasting Unit	15	Bag filter	PM	150 mg/NM ³

4.5. The concentration of the following parameters in the ambient air within the premises of the industry and a distance of 10meters from the source) other than the stack/vent) shall not exceed the following levels.

PARAMETERS	PERMISSIBLE LIMIT
PM 10	100 Microgram/M3
PM 2.5	60 Microgram/M3
SO ₂	80 Microgram/M3
NO _x	80 Microgram/M3



- 4.6. The applicant shall provide portholes, ladder, platform etc at chimney(s) for monitoring the air emissions and the same shall be open for inspection to/and for use of Board's staff. The chimney(s) vents attached to various sources of emission shall be designed by numbers such as S-1, S-2, etc. and these shall be painted/displayed to facilitate identification.
- 4.7. The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standards in respect of noise to less than 75dB(A) during day time and 70 dB (A) during night time. Daytime is reckoned in between 6a.m. and 10 p.m. and nighttime is reckoned between 10 p.m. and 6 a.m.

5. D.G. SETS CONDITIONS

The D.G. Set shall have acoustic enclosure and shall comply with the standards specified at Sr. no. 95 of Schedule-I of the rule-3 of E.P. Rules -1986 and Noise pollution level as per the Air Act-1981.

D.G. Sets standards:-

The flue gas emission through stack attached to D.G. Sets shall conform to the following standards.

- The minimum height of stack to be provided with each of the generator set shall be $H=h + 0.2 (KVA)^{1/2}$, where H= Total stack height in meter, h= height of the building in meters where or by the side of which the generator set is installed.
- Noise from DG set shall be controlled by providing an acoustic enclosure or by treating the room acoustically, at the users end.
- The acoustic enclosure or acoustic treatment of the room shall be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on the higher side (if the actual ambient noise is on the higher side, it may not be possible to check the performance of the acoustic enclosure/ acoustic treatment. Under such circumstances the performance may be checked for noise reduction up to actual ambient noise level, preferably, in the night time). The measurement for insertion loss may be done at different points at 0.5 m from the acoustic enclosure/room, and the averaged.
- The D.G. Set shall be provided with proper exhaust muffler with insertion loss of minimum 25 dB (A).
- All efforts shall be made to bring down the noise level due to the D.G.Set, outside the premises, within the ambient noise requirements by proper siting and control measures.
- Installation of a D.G. Sets must be strictly in compliance with the recommendations of the D.G.Set manufacturer.
- A proper routine and preventive maintenance procedure for the D.G.Set should be set and followed in consultation with the DG Set manufacture which would help prevent noise levels of the DG Set from deteriorating with use.

6. AUTHORIZATION as per HAZARDOUS AND OTHER WASTE (MANAGEMENT AND TRANSBOUNDARY) RULES, 2016 Form-2. [See rule 6 (2)]

Form for grant of authorization for occupier or operator handling Hazardous waste

6.1 Authorization order No:- AWH-87212 date of Issue: 20/07/2017.

6.2 M/s. L&T special Steels And Heavy Forgings Pvt.Ltd. is hereby granted an authorization to operate facility for following hazardous wastes on the premises situated at Plot No:- Hazira Manufacturing Complex, S.No:- 446/A, 498/1, Surat-Hazira Road, Hazira Notified area, Bhatha:- 394510, Tal:- Chorasi, Dist:- Surat.

Sr. No.	Waste	Quantity MT/Year	Schedule-I/ Category	Facility
1	ETP Waste	1000	35.3	Collection, Storage, Transportation and disposal at GPCB authorized TSDF Site.

2	Used Oil	6	5.1	Collection, storage, transportation and disposal by selling to Registered re-refiners.
3	Discarded Containers/ Barrels/Liners	500	33.1	Collection, storage transportation and disposal to authorized decontaminator
4	Dried left over paint (Paint Residue)	1	21.1	Collection, Storage, Transportation and disposal by Incineration at approved CHWI facility.
5	Maintenance waste containing oil/waste oil	20	5.2	

6.3 The authorization shall be valid up to 22/05/2022.

6.4 The authorization is subject to the conditions stated below and such other conditions as may be specified in the rules from time to time under the Environment (Protection) Act-1986.

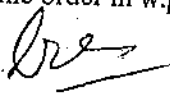
6.5 The authorization is granted to operate a facility for collection, storage within factory premises transportation and ultimate disposal of Hazardous wastes as per condition no.6.2 to the industry having valid CCA of this Board.

7. TERMS AND CONDITIONS OF AUTHORISATION

1. The applicant shall comply with the provisions of the Environment (Protection) Act-1986 and the rules made there under.
2. The authorization or its renewal shall be produced for inspection at the request of an officer authorized by the Gujarat Pollution Control Board.
3. The persons authorized shall not rent, lend, sell, and transfer or otherwise transport the hazardous wastes without obtaining prior permission of the Gujarat Pollution Control Board.
4. Any unauthorized change in personnel, equipment or working conditions as mentioned in the authorization order by the persons authorized shall constitute a breach of this authorization.
5. The person authorized shall implement Emergency Response Procedure (ERP) for which this authorization is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time;
6. The person authorized shall comply with the provisions outlined in the Central Pollution Control Board guidelines on "Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Wastes and Penalty"
7. It is the duty of the authorized person to take prior permission of the Gujarat Pollution Control Board to close down the facility.
8. An application for the renewal of an authorization shall be made as laid down in rules 6(2) under Hazardous Waste and Other Waste Rules, 2016.
9. The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.
10. The record of consumption and fate of the imported hazardous and other wastes shall be maintained.
11. The hazardous and other wastes which gets generated during recycling or reuse or recovery or pre-processing or utilization of imported hazardous or other wastes shall be treated and disposed of as per specific conditions of authorization.
12. The importer or exporter shall bear the cost of import or export and mitigation of damages if any.
13. Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.

14. The waste generator shall be totally responsible for (i.e. collection, storage, transportation and ultimate disposal) the wastes generated.
15. Records of waste generation, its management and annual return shall be submitted to Gujarat Pollution Control Board in Form-4 by 30th day of June of every year for the preceding period April to March.
16. In case of any accident, details of the same shall be submitted on Form-11 to Gujarat Pollution Control Board.
17. As per "Public Liability Insurance Act-91" company shall get Insurance Policy, if applicable.
18. Empty drums and containers of toxic and hazard material shall be treated as per guideline published for "Management & Handling of discarded containers". Records of the same shall be maintained and forwarded to Gujarat Pollution Control Board regularly.
19. In case of transport of hazardous wastes to a facility for (i.e. treatment, storage and disposal) existing in a State other than the State where hazardous wastes are generated, the occupier shall obtain 'No Objection Certificate' from the State Pollution Control Board or Committee of the concerned State of Union Territory Administration where the facility exists.
20. Unit shall take all concrete measures to show tangible results in waste generation, reduction, avoidance, reuse and recycle. Actions taken in this regard shall be submitted within three months and also along with Form-4.
21. Industry shall have to display the relevant information with regards to hazardous waste as indicated in the Hon. Supreme Court's Order in W.P. No.657 of 1995 dated 14th October, 2003.
22. Industry shall have to display on-line data outside the main factory gate with regard to quantity and nature of hazardous chemicals being handled in the plant, including wastewater and air emissions and solid hazardous wastes generated within the factory premises.

8. GENERAL CONDITIONS: -

- 8.1. Any change in personnel, equipment or working conditions as mentioned in the consents form/order should immediately be intimated to this Board.
 - 8.2. Applicant shall also comply with the general conditions given in annexure I.
 - 8.3. Whenever due to accident or other unforeseen act or ever, such emissions occur or is apprehended to occur in excess of standards laid down such information shall be forthwith reported to Board, concerned Police Station, Office of Directorate of Health Service, Department of Explosives, Inspectorate of Factories and local body.
 - 8.4. In case of failure of pollution control equipments, the production process connected to it shall be stopped. Remedial actions/measures shall be implemented immediately to bring entire situation normal.
 - 8.5. The Environmental Management Unit/Cell shall be setup to ensure implementation on and monitoring of environmental safeguards and other conditions stipulated by statutory authorities. The Environmental Management Cell/Unit shall directly report to the Chief Executive of the organization and shall work as a focal point for internalizing environmental issues. These cells/units also coordinate the exercise of environmental audit and preparation of environmental statements.
 - 8.6. The Environmental audit shall be carried out yearly and the environmental statements pertaining to the previous year shall be submitting to this State Board latest by 30th September every year.
 - 8.7. The Board reserves the right to review and/or revoke the consent and/or make variations in the conditions, which the Board deems, fit in accordance with Section 27 of the Act.
 - 8.8. In case of change of ownership/management the name and address of the new owners/partners/directors/proprietor should immediately be intimated to the Board.
 - 8.9. Industry shall have to display the relevant information with regard to hazardous waste as indicated in the Hon. Supreme order in w.p. no. 657 of 1995 dated 14th October 2003.
- 

9. **SPECIFIC CONDITIONS:-**

- 9.1. The authorized actual user of hazardous and other wastes shall maintain records of hazardous and other wastes purchased in a passbook issued by the State Pollution Control Board along with the authorization.
- 9.2. Handling over of the hazardous and other wastes to the authorized actual user shall be only after making the entry in the passbook of the actual user.
- 9.3. In case of renewal of authorization, a self-certified compliance report in respect of effluent, emission standards and the conditions specified in the authorization for hazardous and other wastes shall be submitted to SPCB.
- 9.4. The occupier of the facility shall comply Standard operating procedure/guidelines published by MOEF&CC or CPCB or GPCB from time to time.
- 9.5. Unit shall comply provisions of E-Waste Management Rules-2016.
- 9.6. The disposal of Hazardous Waste shall be carried out as per the waste Management hierarchy.
- 9.7. The occupiers of facilities shall not store the hazardous and other wastes for a period not exceeding ninety days. Prior permission of the Board shall be obtained for extension of the storage period.
- 9.8. The occupier shall maintain the records of generation, sale, storage, transport, recycling, co processing and disposal of hazardous waste and make available during the inspection.
- 9.9. The transportation of the hazardous waste shall be carried out in GPS mounted dedicated vehicles.

For and on behalf of
Gujarat Pollution Control Board


(Smt U.K. Upadhyay)
Environmental Engineer

NO: GPCB/CCA-SRT-1323(2)/ID-20924/ 421213

Date:-

23/8/12

Issued to:
M/s. L&T special Steels And Heavy Forgings Pvt.Ltd.
Plot No:- Hazira Manufacturing Complex,
S.No:- 446/A, 498/1, Surat-Hazira Road,
Hazira Notified area, Bhatha:- 394510,
Tal:- Chiorasi, Dist:- Surat.

Annexure 12A:
CTO Compliance Report

CTO COMPLIANCE REPORT
CTO ref. : AWH-87212 valid up-to Dtd. 22/05/2022

SR. NO.	CONSENT CONDITIONS		COMPLIANCE
1.	PRODUCTS		
1.1	Forgings	60,000 MT/Annum	Complied
1.2	Steel Ingots & Castings	80,000 MT/Annum	Complied
2.	SPECIFIC CONDITIONS		
2.1	Unit shall manufacture products which are mentioned in CTE & EC.		Complied
2.2	Unit shall strictly follow conditions stipulated in EC issued vide order F. No. J-11011/193/2009-IA-II Dtd. 20-10-2009 & its amendment order Dtd. 23-05-2012.		Complied
2.3	Unit shall strictly follow conditions stipulated in CTE order No. 37128 issued vide letter No. GPCB/CE/SRT-2129/49334 Dtd. 20-04-2010 & its subsequent amendment issued vide letter No. GPCB/CCA-SRT-1323/ID-20924/122488 Dtd. 28-08-2012.		Complied
2.4	Unit shall re use wastewater treated from RO Plant & shall use RO Reject water for slag cooling purpose & shall maintain Zero discharge of wastewater.		Complied
2.5	Unit shall provide online monitoring system for air emission & also inform about the same to the board.		Complied
2.6	Unit shall provide flow meter at reuse system and also maintain record of it.		Complied
2.7	Unit shall not generate electricity more than 5 MW without prior EC/CTE.		Noted & Confirmed
3.	CONDITION UNDER THE WATER ACT		
3.1	The quantity of trade effluent to be generated from the manufacturing process and other ancillary industrial operation shall not exceed 2409 KL/Day. Of which 570 KL/Day R.O. Reject water shall be used for slag cooling & remaining treated waste water shall be Re- used in process. There shall be no wastewater discharge outside the premises of the unit.		Complied
3.2	The quantity of Domestic effluent from the factory shall not exceed 80 KL/Day.& shall be treated in STP to norms specified as under :-		Complied
	PARAMETERS	GPCB NORMS	
	BOD	20 mg/l	Complied
	Suspended Solids	30 mg/l	Complied
	Residual Chlorine	0.5 ppm	Complied
	The final treated effluent confirming to the above standards shall be re used for gardening / plantation on land of area about 17.3 Hectares. There shall be no discharge of domestic effluent outside the premises of the unit.		Complied, Treated sewage is reused for gardening and plantation on land (33 % green area provided)
3.3	Trade Effluent:		
3.3.1	The applicant shall provide adequate effluent treatment system so that effluent from the industrial unit shall conform to the GPCB norms mentioned.		Complied
3.3.2	The final treated effluent conforming to the above standards shall be Re- used in process.		Complied
3.3.3	Unit shall provide flow meter at ETP & STP.		Complied
4.	CONDITION UNDER THE AIR ACT		
	The following shall be used as fuel.		
4.1	No.	Quantity	
	1	Natural Gas	28350 NM3//Hr
			Complied

CTO COMPLIANCE REPORT
CTO ref. : AWH-87212 valid up-to Dtd. 22/05/2022

	2	High Speed Diesel (HSD) For D.G. Sets only			800 Lit/Hr		Complied
4.2	The applicant shall install & operate a comprehensive adequate air pollution control system in order to achieve prescribed norms.						Complied, Adequate Fume Extraction System provided with Bag filter house for Electrical Arc Furnace and Ladle Refining Furnace.
4.2.1	The flue gas emission through stack shall conform to the following standards.						
	Stack No.	Stack attached to	Stack height in Meter	Air Pollution Control System	Parameters	Permissible limit	
	1	(1) Electric arc Furnace (100 MT)	50	Fume Extraction System & Bag Filter House	Particulate Matter	150mg/NM ³	Complied
		(2) Ladle Refining Furnace (100 MT)			SO ₂ NO _x	100 ppm 50 ppm	
	2	Reheating Furnace-1 (250 MT)	35	--	Particulate Matter	150mg/NM ³	Complied
		Reheating Furnace-2 (300 MT)			SO ₂ NO _x	100 ppm 50 ppm	
	3	Reheating Furnace-3 (400 MT)	35	--	Particulate Matter SO ₂ NO _x	150mg/NM ³	NA, Not Installed yet.
		Reheating Furnace-4 (400 MT)				100 ppm	
		Reheating Furnace-5 (400 MT)				50 ppm	
		Reheating Furnace-6 (600 MT)					
	4	Reheating Furnace-7 (600 MT)	35	--	Particulate Matter SO ₂ NO _x	150mg/NM ³	NA, Not installed yet.
		Reheating Furnace-8 (800 MT)				100 ppm 50 ppm	
	5	Heat Treatment Furnace-1 (250 MT)	35	--	Particulate Matter SO ₂ NO _x	150mg/NM ³	Complied
		Heat Treatment Furnace-2 (400 MT)				100 ppm	NA, Not installed yet.
		Heat Treatment Furnace-3 (400 MT)				50 ppm	NA, Not installed yet.
		Heat Treatment Furnace-4 (600 MT)					NA, Not installed yet.
	6	Heat Treatment Furnace-5 (400 MT)	35	--	Particulate Matter SO ₂ NO _x	150mg/NM ³	Complied
		Heat Treatment Furnace-6 (300 MT)				100 ppm	NA, Not installed yet.
		Heat Treatment Furnace-7 (600 MT)				50 ppm	NA, Not installed yet.
		Heat Treatment					NA, Not installed yet.

CTO COMPLIANCE REPORT
CTO ref. : AWH-87212 valid up-to Dtd. 22/05/2022

		Furnace-8 (800 MT)					
	7	Natural Gas Based Boiler -1 (30 TPH)	45	--	Particulate Matter	150mg/NM ³	Complied
	8	Natural Gas Based Boiler -2 (34 TPH)			SO ₂ NO _x	100 ppm 50 ppm	
	9	D.G.Sets - 3 Nos. 1010 KVA X 3	30	--	Particulate Matter SO ₂ NO _x	150mg/NM ³ 100 ppm 50 ppm	Complied, 2 DG sets installed, 1 yet to be installed.
	10	D.G.Sets - 1 No. 750 KVA	6	--	Particulate Matter SO ₂ NO _x	150mg/NM ³ 100 ppm 50 ppm	NA, Not installed yet
	11	D.G.Sets - 1 No. 250 KVA	3	--	Particulate Matter SO ₂ NO _x	150mg/NM ³ 100 ppm 50 ppm	Complied
4.2.2	The process emission through the stack attached to the shot blasting shall conform to the following standards:						NA, Not installed yet
	Stack No.	Stack attached to	Stack Height in Meter	Air Pollution Control System	Parameters	Permissible limit	
	1.	Shot Blasting Unit	15	Bag filter	Particulate Matter SO ₂ NO _x	150mg/NM ³ 100 ppm 50 ppm	
4.2.3	The concentration of the following parameters in the ambient air within the premises of the industry and a distance of 10 meters from the source other than the stack/vent) shall not exceed the following levels :						Complied, For monitoring of Ambient Air Quality, 4 Nos. of AAQM stations developed and kept at defined location as per the standard for manual monitoring on monthly basis. Also Online Monitoring system is installed for regular monitoring of Ambient Air Quality.
	PARAMETERS			PERMISSIBLE LIMIT			
	Particulate matter ₁₀			100 Microgram per cubic meter			
	PM _{2.5}			60 Microgram per cubic meter			
	Oxides of Sulphur			80 Microgram per cubic meter			
	Oxides of Nitrogen			80 Microgram per cubic meter			
4.2.4	The applicant shall provide portholes, ladder, platform, etc at chimney(s) for monitoring the air emission and the same shall be open for inspection to/and for use of Board's staff. The chimney(s) vents attached to various sources of emission shall be designated by numbers such as S-1, S-2, etc and these shall be painted/displayed to facilitate identification.						Complied
4.2.5	The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standards in respect of noise to less than 75db(a) during day time and 70db (A) during night time. Daytime is reckoned in between 6a.m. and 10p.m and nighttime is reckoned						Complied

CTO COMPLIANCE REPORT
CTO ref. : AWH-87212 valid up-to Dtd. 22/05/2022

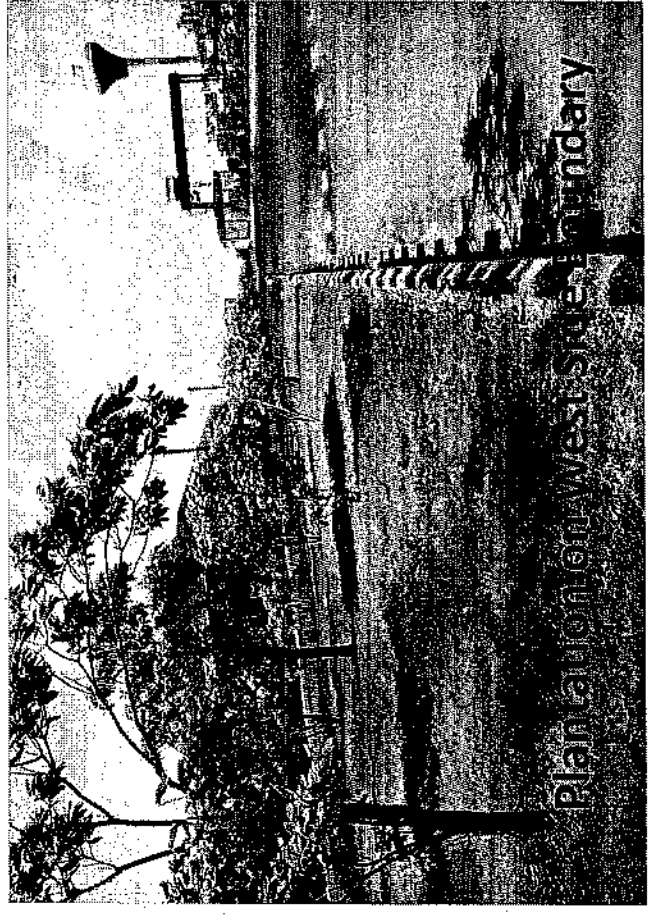
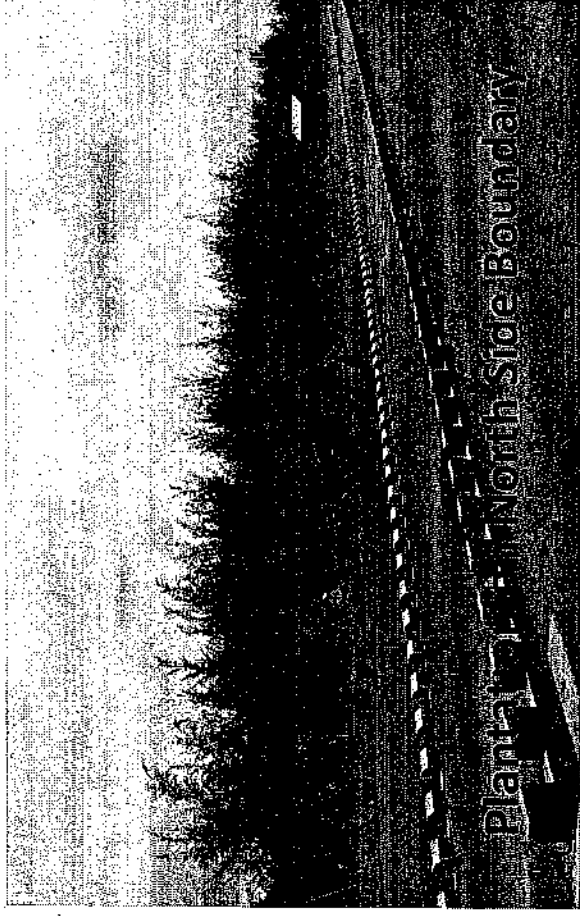
	between 10 p.m. and 6 a.m.					
5.	GENERAL CONDITION					
5.1	Any change in personnel, equipment or working condition as mentioned in the consents form/order should immediately be intimated to this Board.	Noted				
5.2	Applicant shall also comply with the general condition given in annexure.	Noted and Confirmed				
5.3	If it is established by any competent authority that the damage is caused due to their industrial activities to any person or his property in that case they are obliged to pay the compensation as determined by the competent authority.	Noted				
6.	AUTHORISATION FOR THE MANAGEMENT & HANDLING OF HAZARDOUS WASTES Form -2 (See rule 3 (c) & 5 (5))					
6.1	Number of authorization: AWH-49308 Date of issue: 05/09/2012	Noted				
6.1.1	M/s. L & T Special Steels and Heavy Forgings Pvt. Ltd. is hereby granted an authorization to operate facility for following hazardous wastes on the premises situated at Plot No. Hazira Manufacturing Complex, Surat- Hazira Road, Industrial Estate, Bhatha- 394 510 Tal : Chorasi Dist : Surat.					
	Sr. No.	Waste	Quantity	Schedule-1 Process No.	Facility	
		ETP Sludge	1000 MT/Yr	34.3	Collection, storage, transportation disposal at TSDF Site M/S. BEIL, Ankleshwar	Complied
		Dried Left over Paint (Paint Residue)	1 MT/Yr	21.1	Collection, storage, transportation disposal by Incineration at Approved CHWI Facility.	Complied, We are member of CHWMF, M/s BEIL, Ankleshwar for TSDF and Incineration facility.
		Used/Spent Oil	6 MT/Yr	5.1	Collection, storage, transportation disposal by selling to GPCB Registered rerefiners.	Complied
		Maintenance Waste Containing Oil/Waste Oil	20 MT/Yr	5.2	Collection, storage, transportation disposal by Incineration at Approved CHWI Facility.	Complied, We are member of CHWMF, M/s BEIL, Ankleshwar for TSDF and Incineration facility.
		Discarded Containers	500 #/Yr	33.3	Collection, Storage, decontamination.	Complied
6.1.2	The authorization is granted to operate a facility for collection, storage, within the factory premises transportation and ultimate disposal of Hazardous Waste at TSDF Site. M/S. Bharuch Enviro Infrastructure Ltd. (BEIL), Ankleshwar.					Complied
6.1.3	The authorization shall be valid up to 14/05/2017.					Noted
6.1.4	The authorization is subject to the condition stated below and such other condition as may be specified in the rules from time to time under the Environment (Protection) Act-1986 and Haz. Waste (M & H and T M) Rules 2008.					Noted
6.1.5	TERMS AND CONDITION OF AUTHORIZATION :					
	a) The applicant shall comply with the provisions of the Environment (Protection) Act-1986 and the rules made there under.					Noted and Confirmed
	b) The authorization shall be produced for inspection at the request of an officer authorized by the Gujarat Pollution Control Board.					Noted and Confirmed

CTO COMPLIANCE REPORT
CTO ref. : AWH-87212 valid up-to Dtd. 22/05/2022

	c) The persons authorized shall not rent, lend, sell, and transfer of otherwise transport the hazardous wastes without obtaining prior permission of the Gujarat Pollution Control Board.	Noted and Confirmed
	d) Any unauthorized change in personnel, equipment or working conditions as mentioned in the authorization order by the persons authorized shall constitute a breach of this authorization.	Noted
	e) It is the duty of the authorized person to take prior permission of the Gujarat Pollution Control Board to close down the facility.	Noted
	f) An application for the renewal of an authorization shall be made as laid down in rule 5 (6) (ii)	Noted
	g) Industry shall have to manage waste oil, discarded containers etc. as per amended rules 2003.	Complied
	h) Industry shall submit annual report within 15 days and subsequently by 31 st January every year.	Complied
7.	Industry shall have to display the relevant information with regard to hazardous waste as indicated in the Supreme Court's order in W.P. No. 657 of 1995 dated 14th October 2003.	Complied
8.	Industry shall have to display on- line data outside the main factory gate with regard to quantity and nature of hazardous chemicals being handled in the plant, including waste water and air emissions and solid hazardous wastes generated within the factory premises.	Complied

Annexure 13:
Photographs of Green Belt Area

Plantation Across the plant (More than 30 acres of Green Area & More than 7702 nos. of trees)



Annexure 14:

Certificates and Recognitions

DNV GL

MANAGEMENT SYSTEM CERTIFICATE

Certificate No:
178522-2015-AQ-IND-RvA

Initial certification date:
18, June, 2012

Valid:
18, June, 2015 - 17, June, 2018

This is to certify that the management system of

**L & T Special Steels and Heavy Forgings
Pvt. Ltd.**

Hazira Manufacturing Complex, Surat - 394 510, Gujarat, India

has been found to conform to the Quality Management System standard:
ISO 9001:2008

This certificate is valid for the following scope:
**Manufacture and supply of liquid metals, Ingots & forgings
(including semis)**

Place and date:
Chennai, 17, June, 2015



The RvA is a signatory to the IAF MLA

For the Issuing office:
DNV GL - Business Assurance
ROHA, No. 10, SST Road, Alandur,
Chennai, PIN - 600 016, India

Sriramesan Medirath
Management Representative

Lack of fulfillment of conditions as set out in the Certification Agreement may render this Certificate invalid.
ACCREDITED UNIT: DNV GL Business Assurance B.V., PO BOX 29000, 1000 CB AMSTERDAM, THE NETHERLANDS. TEL: +31 (0)20 222 2266. www.dnvgl.com

BUREAU VERITAS
Certification



L&T Special Steels and Heavy Forgings Pvt. Ltd.

Hazira, India.

Bureau Veritas Certification certify that the Management System of the above organization has been audited and found to be in accordance with the requirements of the management system standard detailed below

Standard

BS OHSAS 18001:2007

Scope of certification

Manufacture and Supply of Ferrous Heavy Forgings, Special Steels and Liquid Metals for Nuclear & Thermal Power, Hydrocarbon, Steel, Ship Building, Defense Equipment & Systems and Steel Fabrication

Certification cycle start date: **30 August 2014**

Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on: **29 August 2017**

Original certification date: **11 July 2012**

Certificate No. **IND14.6417UHS/15** Version: **2** Revision date: **10 December 2014**

Signed on behalf of BVCH SAS – UK Branch
Ramesh KOREGAVE
General Manager, CERTIFICATION
South Asia Region



Certification body
address:

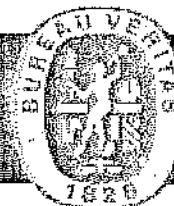
5th Floor, 85 Princes Street, London, E1 8KE, United Kingdom

Local office:

Warner Centre 5th Floor, Krishna's Marwah Marg,
Opp. Aras Industrial Estate, Off Sree Vihar Road,
Andheri (East), Mumbai – 400 072, India

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organization. To check this certificate validity please call +91 22 6695 6300.

BUREAU VERITAS
Certification



L&T Special Steels and Heavy Forgings Pvt. Ltd.

Hazira, India.

Bureau Veritas Certification certify that the Management System of the above organization has been audited and found to be in accordance with the requirements of the management system standard detailed below

Standard

ISO 14001:2004

Scope of certification

Manufacture and Supply of Ferrous Heavy Forgings, Special Steels and Liquid Metals for Nuclear & Thermal Power, Hydrocarbon, Steel, Ship Building, Defense Equipment & Systems and Steel Fabrication

Certification cycle start date: **30 August 2014**

Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on: **28 August 2017**

Original certification date: **11 July 2012**

Certificate No. **IND14.5417U/EN2** Version: **2** Revision date: **10 December 2014**

Signed on behalf of BVCH SAS - UK Branch
Rahul MALIK
General Manager, TECHNICAL (GER BL)
South Asia Region



Certification body
address

5th Floor, 62 Prescot Street, London, E1 6HQ, United Kingdom.

Local office:

**Wiprosh Center 8th Floor, Kishore Mohan Marg,
Opp. Azim Industrial Estate, Off. East-West Road,
Andheri (East) - Mumbai - 400 072, India**

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organization. To check this certificate validity please call +91 22 6565 6300.



L&T Special Steels and Heavy Forgings Pvt. Ltd.

Hazira, India.

Bureau Veritas Certification certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standard detailed below:

Standard

ISO 50001:2011

Scope of certification


Manufacture and Supply of Ferrous Heavy Forgings, Special Steels and Liquid Metals for Nuclear & Thermal Power, Hydrocarbon, Steel, Ship Building, Defense Equipment & Systems and Steel Fabrication

Certification cycle start date: **23 December 2014**

Subject to the continued satisfactory operation of the organisation's Management System, this certificate expires on: **22 December 2017**

Original certification date: **15 May 2013**

Certificate No. **IND14.6627/EN/1** Version **1** Revision date **23 December 2014**


Certification Authority
Rahul NAYAK
General Manager, TECHNICAL (CER.BJ)
South Asia Region

Location:

Mumbai Center One Floor, Keshavnagar, Marolli Nagar
Opp. Ansa Industrial Estate, CIT 66th Ward Road,
Andheri (East), Mumbai - 400 072, India.

For further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organization.
To check this certificate validity please call +91 22 6696 6300.

Indian Green Building Council (IGBC)

hereby certifies that

Administrative Block for L&T Special Steels & Heavy Forgings Pvt. Ltd.

Hazira - Surat

*has successfully achieved the Green Building Standards required for
the following level of certification under the Leadership in Energy and Environment Design
(LEED) for India Green Building Rating System*

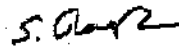
**LEED India for New Construction Platinum
September 2013**



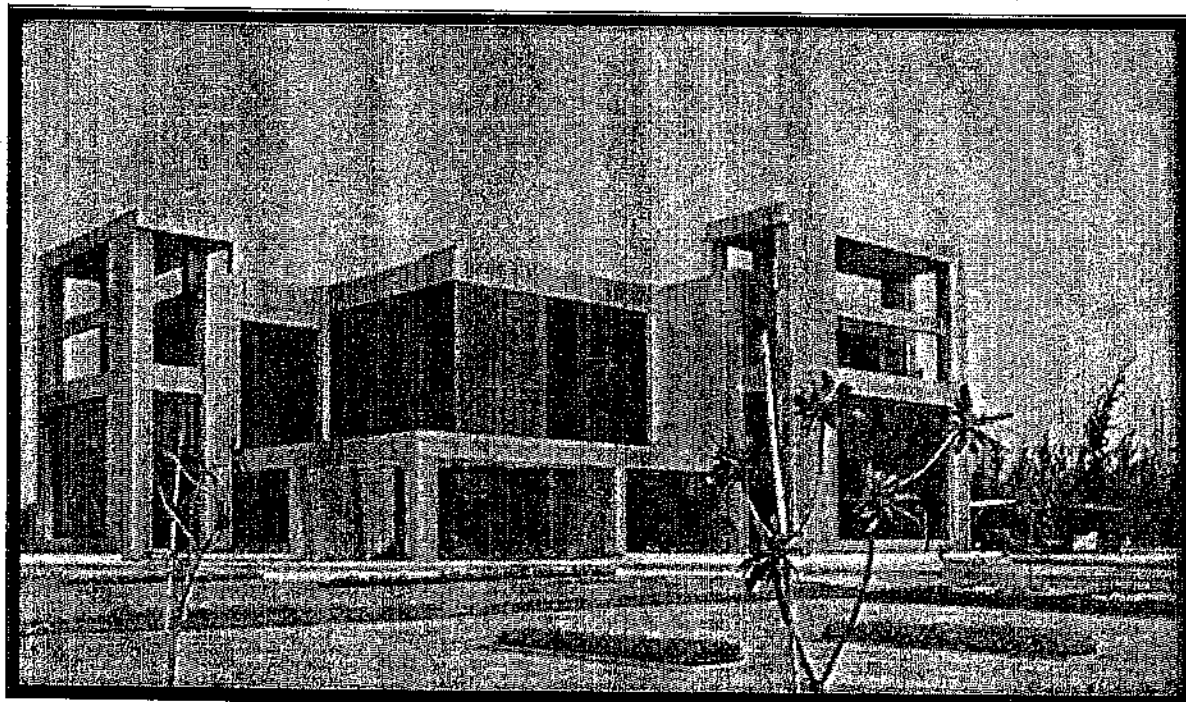
C N Raghavendran
Chairman, LEED India



Dr Prem C Jain
Chairman, IGBC



S Raghupathy
Executive Director, CII-Godrej GBC





L&T Special Steels and Heavy Forgings Pvt. Ltd.

LTSSHF 2 Teams Won Gold Award at QCFI-Vadodara Chapter
27th Annual convention on Quality concepts on Sept. 18th, 2016



Abhilekhan
Trophy

Gold
Award

**Team Prayas
Quality Circle**



Gold
Award

**Team Parivartan
Allied Concept**



Firojkhani Shaikh, Bipeen Chaugule, Umang Patel, Amol Mahulkar, Vivek Patel, Gopinathan & Baljeet Shah