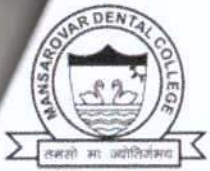


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7.1.5 Installation or maintenance reports of water conservation



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EFFLUENT TREATMENT PLANT :-

Effluent contains mainly high BOD/COD as compare to STP. The treatment scheme includes following steps:-

TREATMENT STEPS:-

- Removal of foreign particles.
- Removal of suspended impurities.
- Reducing of BOD & COD.
- Removal of excess sludge after aeration.
- Removal of excess impurities during tertiary treatment.
- Removal of microorganism bacteria, virus etc.

PROCESS:-

Step1:-Effluent is collected into Equilisation tank after passing through Bar Screen.

Step2:-Water is now transferred from Equilisation tank to Primary Settling Tank. All the inlet of Equilisation Tank in built Oil & grease absorption cartage is installed inside the system.

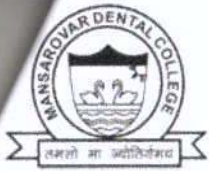
Step3:-Dosing of alum & repalum with pH booster is done in Primary settling tank, depending the quality & pH of inlet effluent.

Step4:-Effluent from PST will move to Secondary Settling Tank by gravity.

Step5:-Over flow from Secondary Settling Tank will be transferred to Pre Filter Tank(PFT) by gravity.

Step6:-Excess sludge & suspended impurities from PST & SST are in to Sludge Bed.

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Step7:-Sludge is collected into sludge Tank.

Step8:-Now this water will be passed to Water Treatment plant, which Contains pebbles, bevels, sand & Activated carbon.

Step9:-To remove microbiological load water is passed through Micron Cartage Filter.

Step10:-Finally water is collected into storage tank.

TECHNICAL DETAILS OF THE PROPOSED ETP:

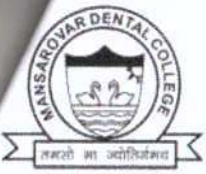
Total flow = Up to 10,000Ltrs.{10 KLD}

Flow rate = 100 Ltr /hr.

TREATED WATER QUALITY		
pH	:	6.5 - 9.0
S Solids	:	100 mg/l
BOD	:	30 mg/l
COD	:	250 mg/l
Oil & Grease	:	10 mg/l

<u>Submersible Sump Pump:-</u>		
Location	:	Equalizing Tank
Quantity	:	1 no.
Capacity	:	2 m ³ / hrs
Head	:	12 – 15 mtr
Solid handling cap.	:	Min. 28 mm
Make	:	Kirloskar


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<u>Filter Feed Pump</u>		
Location	:	Near Clear/Filter Feed tank
Type	:	Centrifugal Transfer pump
Capacity	:	2 m ³ /hrs
Head	:	30-35 Mtr
Quantity	:	1 No.
Make	:	Kirloskar
<u>Multigrade Pressure Sand Filter with carbon:-</u>		
Location	:	Near Clear/Filter Feed tank
Quantity	:	1 No
Capacity	:	13-15 m ³ /hrs
Size of Filter	:	400 mm X 1200 mm High
Make	:	LIECL

<u>OIL & ABSORPTION CARTAGE</u>		
Location	:	At inlet of PST
Quantity	:	1 No.
Capacity	:	For 2M ³ /hrs.
Size of Filter	:	0.5 x 0.5 x 0.5 mtr.
Make	:	LIECL


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AUTO DOSING SYSTEM:-

Location	:	Near Treated Water Tank
Quantity	:	01 No.
Capacity	:	2-6 Ltr./hour
Type	:	Automatic

BAR SCREEN

Location	:	Near Equilisation Tank
Quantity	:	1 No
Capacity	:	For 5 m ³ /hrs
Size of Filter	:	0.5 mtr X 0.5mtr X0.5mtr
Make	:	LIECL

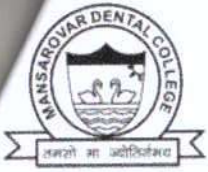
EFFLUENT TREATMENT PALNT (M.S) INTERNALLY FRP COATED:-

20" Cartage:-

Location	:	After WTP
Quantity	:	01 No.
Material	:	PP
Type	:	Automatic

Row

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SPECIFICATION:-

A. L	=	550 MM
W	=	550 MM
HEIGHT	=	1500 MM

This System contains Three Chambers.

1. PRIMARY SETTLING TANK - CHAMBER - 1
2. SECONDARY - CHAMBER - 2
3. PRE FILTER TANK - CHAMBER - 3

Remarks :The whole system is made in Mild Steel with internally FRP coated, to protect system from commission.


B. MULTIGRADE SAND FILTER WITH ACTIVATED CARBON:-

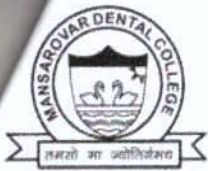
• DIA	=	400MM
• HOS	=	1200MM
• FRONTAL PIPE LINE	=	1 SET
• MEDIA	=	100 KG
• CARBON	=	25 KG

C. SLUDGE BED:- SPECIFICATION:-

L	=	500 MM
W	=	500 MM
HEIGHT	=	500 MM

Remarks :Sludge Bed is made of Mild Steel, with internal FRP coated to avoid corrosion.


Dr. B. Gundatt Nayak
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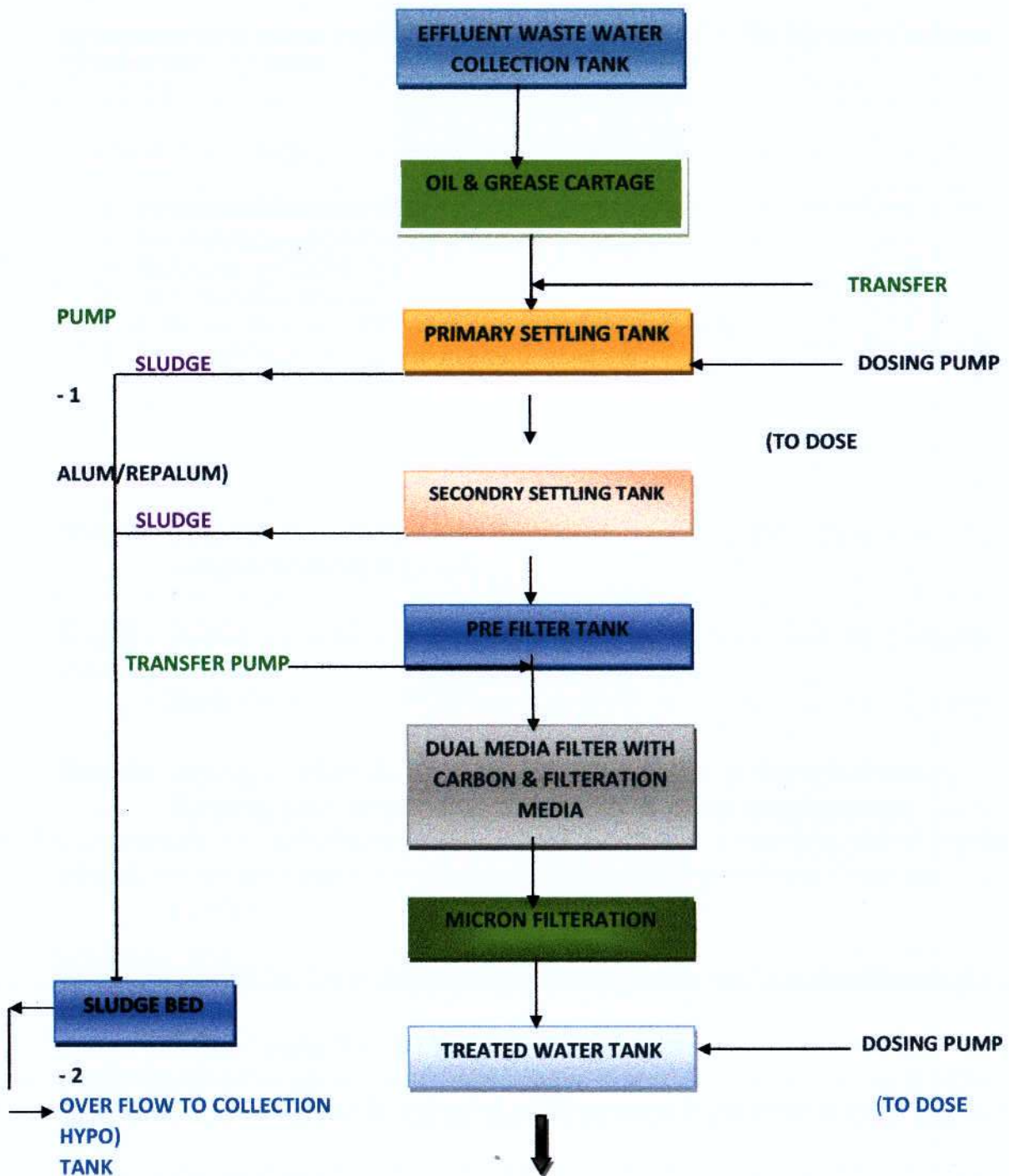


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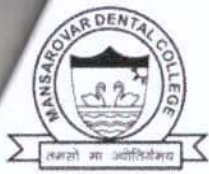
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DRAWING OF ETP



FOR WASHING & GARDENING

Bow
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SEWAGE TREATMENT PLANT :-

Sewage contains mainly high BOD/COD as compare to STP. The treatment scheme includes following steps:-

TREATMENT STEPS:-

- Removal of foreign particles.
- Removal of suspended impurities.
- Reducing of BOD & COD.
- Removal of excess sludge after aeration.
- Removal of excess impurities during tertiary treatment.
- Removal of microorganism bacteria, virus etc.

PROCESS:-

Step1:- Sewage is collected into Equilisation tank And Aeration done by submersible type blower.

Step2:- Water is now transferred from Equilisation tank to Primary Settling Tank.

Step3:- Dosing of alum & repalum with pH booster is done in Primary Settling tank, depending the quality & pH of inlet Sewage.

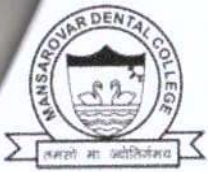
Step4:- Sewage from PST will move to Secondary Settling Tank by gravity.

Step5:- Over flow from Secondary Settling Tank will be transferred to Pre Filter Tank(PFT) by gravity.

Step6:- Excess sludge & suspended impurities from PST & SST are in to Sludge Bed.

Step7:- Sludge is collected into sludge Tank.

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Step8:- Now this water will be passed to Water Treatment plant, which Contains pebbles, bevels, sand & Activated carbon.

Step9:- To remove microbiological load water is passed through Micron Cartage Filter.


Step10:- Finally water is collected into storage tank.

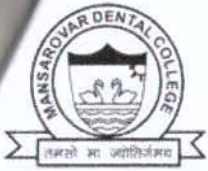
TECHNICAL DETAILS OF THE PROPOSED ETP:

Total flow = Up to 25,000Ltrs. {25 KLD}
Flow rate = 1500 Ltr /hr.

TREATED WATER QUALITY		
pH	:	6.5 - 9.0
S Solids	:	100 mg/l
BOD	:	30 mg/l
COD	:	250 mg/l
Oil & Grease	:	10 mg/l

Submersible Sump Pump:-		
Location	:	Equalizing Tank
Quantity	:	1 no.
Capacity	:	2 m ³ / hrs
Head	:	12 - 15 mtr
Solid handling cap.	:	Min. 28 mm
Make	:	Kirloskar


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Multigrade Pressure Sand Filter with carbon:-

Location	:	Near Clear/Filter Feed tank
Quantity	:	1 No
Capacity	:	13-15 m ³ /hrs
Size of Filter	:	600 mm X 1200 mm High
Make	:	LIECL

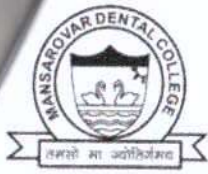
Filter Feed Pump

Location	:	Near Clear/Filter Feed tank
Type	:	Centrifugal Transfer pump
Capacity	:	2 m ³ /hrs
Head	:	30-35 Mtr
Quantity	:	1 No.
Make	:	Kirloskar

AUTO DOSING SYSTEM:-

Location	:	Near Treated Water Tank
Quantity	:	01 No.
Capacity	:	2-6 Ltr./hour
Type	:	Automatic

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20" Cartage:-	
Location	: After WTP
Quantity	: 01 No.
Material	: PP
Type	: Automatic

SEWAGE TREATMENT PALNT (M.S) INTERNALLY FRP COATED:-

SPECIFICATION:-

D. L	=	2500 MM
W	=	1200 MM
HEIGHT	=	1500 MM

This System contains Three Chambers.

- | | | |
|--------------------------|---|-------------|
| 4. PRIMARY SETTLING TANK | - | CHAMBER - 1 |
| 5. SECONDARY | - | CHAMBER - 2 |
| 6. PRE FILTER TANK | - | CHAMBER - 3 |

Remarks :The whole system is made in Mild Steel with internally FRP coated, to protect system from commission.


E. MULTIGRADE SAND FILTER WITH ACTIVATED CARBON:-

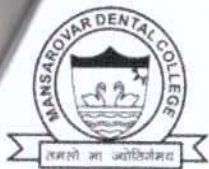
• DIA	=	600MM
• HOS	=	1200MM
• FRONTAL PIPE LINE	=	1 SET
• MEDIA	=	100 KG
• CARBON	=	100 KG

F. SLUDGE BED:- SPECIFICATION:-

L	=	500 MM
W	=	500 MM
HEIGHT	=	500 MM

Remarks :Sludge Bed is made of Mild Steel, with internal FRP coated to avoid commission.


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INVOICE

GSTIN - AAACL6750D1ZW

LAL ION EXCHANGE AND CHEMICALS (P) LTD.
PVT. LTD. REGD. OFF. SECTOR INDUSTRIAL AREA,
GOVINDPURA, BHOPAL-462 022. 9300814112. 9301239585
Regd. Office B-7, Ashoka Complex, Zone-II, M.P. Nagar Bhopal
Email: lalionexchange@yahoo.com

ISO
LIECL

To, Mansarovar Dental College Opposite Bimakunj, Kolar Road Bhopal (M.P.)	INVOICE No.	LIECL/17-18/Se-001			
	Date	01.09.2017			
	P.O. No.	By Agreement			
	Date of Order				
	GSTin No.	23AAACL6750D1ZW			
	Party GSTin				
	Pan No.	AAACL6750D			
o	PARTICULARS	QTY.	Unit	Rate/Unit	Amount (in Lacs)
1.	Supply, Design, Errection & Commission of Water Treatment Plants (WTP)	02	Nos.	400000/-	400000.00
	Bank Name - HDFC	Total Amount			400000.00
	Branch - Ashoka Garden, Bhopal	GST 18%			Inclusive
	Account No. - 50200024672392	Round off			0.00
	IFSC Code - HDFC0009020	Total Amount			400000.00
	A/C Name - Lal Ion Exchange & Chemicals (P) Ltd.				

Rs. Four Lakhs Only

for **LAL ION EXCHANGE AND CHEMICALS (P) Ltd.**
Authorized Signatory

Authorized Signatory

Dr. B. Gurudatt Nayak
Principal
Mansarovar Dental College
BHOPAL



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AGREEMENT

Lal ION EXCHANGE AND CHEMICALS (P) LTD.
 FACTORY PLOT NO. 10-A SECTOR-1 INDUSTRIAL AREA
 GOVINDPURA, BHOPAL-462 023 9300814112 9301239585
 Regd. Office G-7 Vaikund Complex Zone-II, M.P. Nagar Bhopal
 Email : lioexchange@yahoo.com

ISO

LIECL

Date: 28/3/2017

Agreement

This agreement has been made between Lal Ion Exchange And Chemicals (P) Ltd. , Bhopal
 & M/S Mansarovar Group of Institutions, Kolar Road, Bhopal, M.P.

For water recycling Plant. Following condition are mutually agreed by both.

Cost of Plant: - Rs. 4 Lacs Inclusive All Taxes.

Advance Payment: - Rs. 2.40 Lacs. (Means 60% Advance)

Balance Payment Details:-

1. 40% After Installation of PLANT.

Delivery : within 45 days.

For Mansarovar Group of Institutions

For Lal Ion Exchange & Chemicals (P) Ltd.

(over quotations (2 separate for ESP & STP) dated 20/2/17 are part of this agreement regarding technical & other details)

Lal Ion Exchange and Chemicals (P) Ltd. (G.C. Haxode)
 9826681939
 Authorised Signatory

Bhopal

Party - 1

Party - 2

Authorised Signatory

Authorised Signatory

BNW

Dr. B. Gurudatt Nayak
Principal
Mansarovar Dental College
BHOPAL