



SRES's
SHREE RAMCHANDRA COLLEGE OF ENGINEERING
Lonikand, Pune – 412216

Date: 16/06/2022

REPORT OF SEWAGE TREATMENT PLANT

- ❖ **TITLE:** Sewage Treatment Plant
- ❖ **NAME OF INSTITUTE:** Shree Ramchandra college of Engineering Lonikand, Pune
- ❖ **NAME OF SUPPLIER:** Panshul Engineering & Chemicals Pvt. Ltd.
- ❖ **QUOTATION REF:** 155/PECPL/STP/21/03 **Date:** 21-03-2022, R-2
- ❖ **NATURE OF WASTE WATER:** Sewage
- ❖ **CAPACITY:** 30 KLD
- ❖ **Technology:** Moving Bed Biofilm Reactor (MBBR)
- ❖ **Cost of Design supply & Installation commissioning of sewage treatment plant=** RS 5.75000.00
- ❖ **Cost of Civil work (Construction & Material Cost of Wastewater Tank):**
Rs 214000.00 + Rs 3,55000.00 = Rs 5,69000.00
- ❖ **Contact Person of Civil work:** More Contractor (+91 9096698901)
- ❖ **Contact Person of Panshul Engineering & Chemical Pvt. Ltd.** Appaso Jangam (+91 9923918207)

Objective:

1. To treat the Wastewater and make it safe for human and environmental contact. Physical processes treat the wastewater by solid-liquid separation or biological functions like aerobic digestion.
2. To protect the environment from water pollution by removing contaminants such as bacteria, nutrients, chemicals and particulates, which are harmful.
3. Eco –friendly green development
4. Sewage Treatment & recycle.

Processes involved are under:

Primary Treatment	Secondary Treatment	Tertiary Treatment
Bar screen chamber	Aeration tank	filtration
Oil and grease chamber	Secondary Clarifier	Disinfection
Neutralization	Intermediate storage Tank	Sludge Treatment
Equalization tank		Sludge Holding Tank
Primary Clarifier		Sludge Drying Bed

Assumptions:

- 1.The plant is designed to operate at +/- 10 % variation in raw wastewater parameter.
- 2.No other parameters other than mentioned above is present in the raw waste water which is beyond Pollution Control Norms and hazardous to microorganisms.
- 3.Treated water quality will be achieved if the inlet raw water quality is as per the raw water quality mentioned as well as no other pollutant than the mentioned, is present or exceeds the limits or which is hazardous in nature, which otherwise may affect the biological treatment process.





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Sewage Treatment Plant Construction Photo



Geotag Photo



H2XC+56P, Pune, Maharashtra 412207, India

Latitude	Longitude
18.602293333333333°	74.02161500000001°
Local 12:04:28 PM	Altitude 596.1 meters
GMT 06:34:28 AM	Thursday, 16-06-2022

Note : Shree Ramchandra College Of Engineering



H2XC+56P, Pune, Maharashtra 412207, India

Latitude	Longitude
18.602356666666665°	74.02166833333334°
Local 12:03:16 PM	Altitude 598 meters
GMT 06:33:16 AM	Thursday, 16-06-2022

Note : Shree Ramchandra College Of Engineering

Sewage Treatment Plant

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A) Raw domestic sewage from (Academic/admin buildings, hostels etc) Toilet Flow has following ingredients:

Sr. No.	Raw Sewage Parameter (At the inlet of Collection tank / Septic tank)	Range Of Parameter
1	pH	6-7
2	COD	400-500 mg/lit
3	BOD (5 days @ 200C)	250-350 mg/lit
4	Suspended Solids	400 mg/lit
5	Oil & Grease	10-30 mg/lit

B) Treated sewage water parameter at the exit of sewage treatment plant flow has following ingredients:

Sr. No.	Treated Sewage Water Parameter	Range Of Parameter	Maximum Allowable Limit (as per CPCB)	Remark
1	pH	6.0 – 8.5	5.5 – 9.0	Accepted
2	COD	≤ 250 mg/lit	≤ 250 mg/lit	Accepted
3	BOD (5 days @ 20°C)	≤ 100 mg/lit	≤ 100 mg/lit	Accepted
4	Suspended Solids	≤ 100 mg/lit	≤ 100 mg/lit	Accepted
5	Oil & Grease	≤ 10 mg/lit	≤ 10 mg/lit	Accepted

Note: Comparing tables 'A' & 'B' above the treated water quality is within acceptable range.

Advantages of STP:

- 1.This plant will produce the treated water which is recycled.
- 2.This plant is based on biological principle hence no need use of any excessive hazardous chemicals for the main degradation process.
- 3.Being an attached growth process there is no need of Return sludge recycling.
- 4.Due to media technology, foot print area required for the plant is very less.
- 5.Due to smaller unit sizes, civil construction cost & overall project cost is very less.
- 6.Due to efficient aeration system, electrical power requirement is very low.
- 7.Due to user friendly equipment, plant maintenance is very less.
- 8.Due to inbuilt automation, plant machinery life is high & ensures trouble free operation.
- 9.All process rotating electromechanical equipment is provided with standby equipment to ensure the uninterrupted operation.

01/06/22

Prepared By.
Prof. Pawar S. P.



Checked by.
Principal
Prof. Dr. Avinash Desai