



SRI KRISHNA COLLEGE OF ENGINEERING AND TECHNOLOGY
An Autonomous Institution | Approved by AICTE | Affiliated to Anna University
Kuniamuthur, Coimbatore - 641008

6.3.1 WASTEWATER TREATMENT



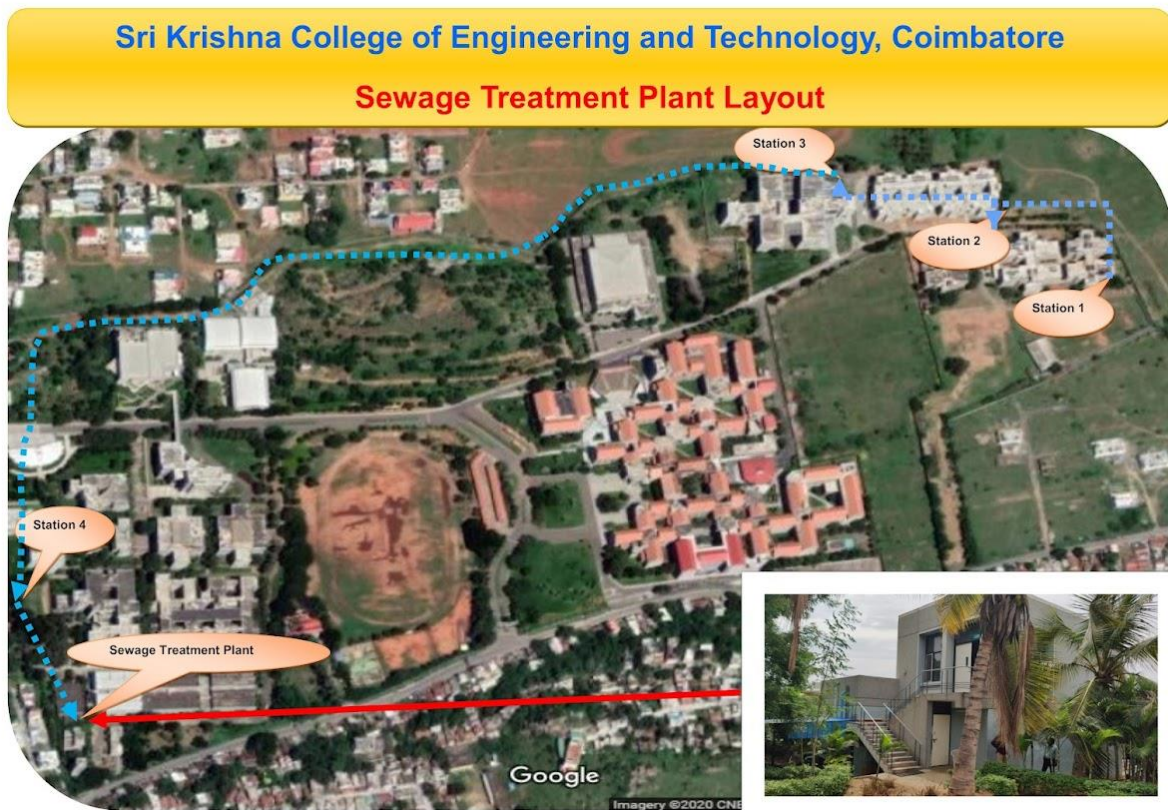


6.3.1 Waste water treatment

Process in place to treatwaste water

The campus wastewater discharged from restrooms, canteen and washing area is recycled through Sewage Treatment Plant installed inside the campus with a capacity of 450KLD. The treated wastewater is reused for gardening, flushing in toilets and cleaning vehicles.

The liquid waste produced by canteens, mess and toilets undergoes treatment at the on-campus Sewage Treatment Plant (STP) with a 450 KLD capacity located behind the laboratory block. The recycled water, enriched with nutrients beneficial for plant growth, is utilized for gardening purposes.





SEWAGE TREATMENT PLANT





Sri Krishna College of Engineering and Technology, Coimbatore
Collection Station Pictures



Collection Station 1 (10° 56' 21.3648" N, 76° 57' 43.6716" E)
Located beside the Hall of Residence Men (E-block)



Collection Station 2 (10° 56' 23.4024" N, 76° 57' 41.31" E)
Located adjacent to the Hall of Residence Men (B-block)



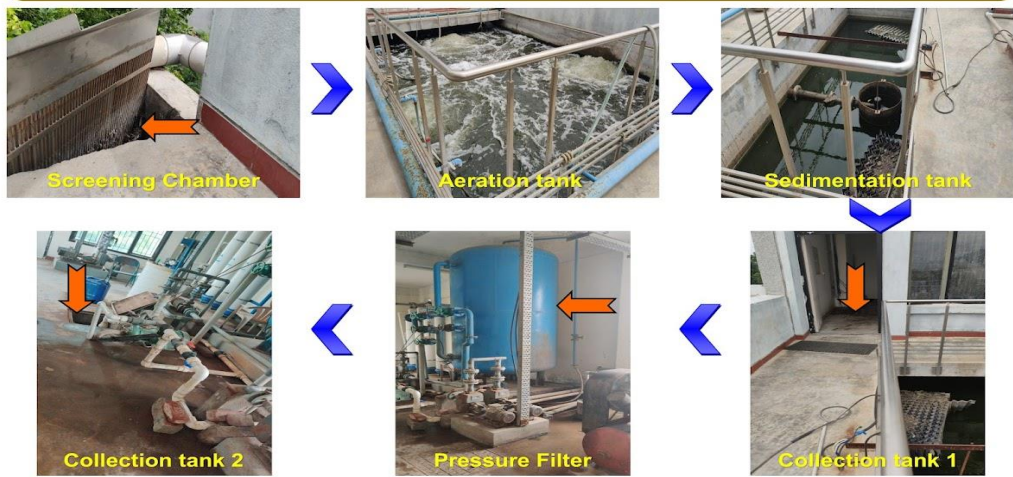
Collection Station 3 (10° 56' 24.6984" N, 76° 57' 37.0872" E)
Located backside of the Hall of Residence Men (Mess block)



Collection Station 4 (10° 56' 10.9248" N, 76° 57' 19.3752" E)
Located backside of the C3 block men's restroom

The treatment process involves several stages:

Sri Krishna College of Engineering and Technology, Coimbatore
Sewage Treatment Plant Layout



Stage 1: Screening Chamber



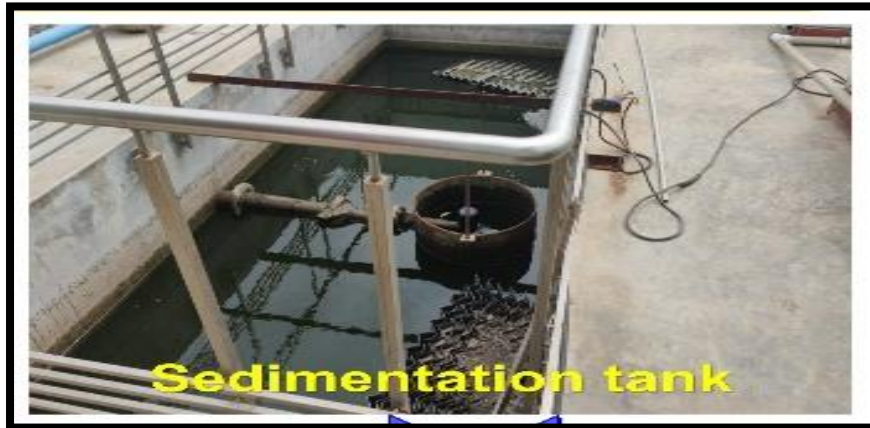
Screening chamber is the first unit operation used at STP. Screening removes objects such as rags, paper, plastics, and metals to prevent damage and clogging of downstream equipment, piping, and appurtenances. The screened wastewater then flows to an aerated grit chamber. Some modern wastewater treatment plants use both coarse screens and fine screens.

Stage 2: Aeration Tank



Waste water **Aeration** is the process of adding air into wastewater to allow aerobic bio-degradation of the pollutant components. It is an integral part of most biological wastewater treatment systems. Unlike chemical treatment which uses chemicals to react and stabilize contaminants in the wastewater stream, biological treatment uses microorganisms that occur naturally in wastewater to degrade wastewater contaminants.

Stage 3: Sedimentation Tank



Sedimentation tank allows the particles in suspension in water to settle out of the suspension under the effect of gravity. The particles that settle out from the suspension become sediment, and in water treatment this residue is known as sludge.

Stage 4: Collection Tank 1



Collection tank 1 collects the aerated water flowing from the aeration tank. This collection tank 1 acts as a storage reservoir of the water which is to be fed into the pressure filter.



Stage 5: Pressure Filter



A **Pressure filter** is a closed tank with a single or a combination of filter media for removal of one or several contaminants. Sand-bed filters are operated under pressure in closed vessels to give high-capacity service.

Stage 6: Collection Tank 2



Collection tank 2 collects the filtered water flowing from the Pressure Filter. This collection tank 2 reserves the treated water which will be supplied for campus re-use in Gardening, Vehicle Washing and Rest rooms (Toilet Flushing).



WASTE WATER QUALITY TEST REPORT



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ENGINEERING AND TECHNOLOGY**
(An Autonomous Institution, Approved by AICTE & Affiliated to Anna University), Accredited by NAAC with 'A' Grade
Kuniamuthur, Coimbatore - 641 008.

26.05.2023

DEPARTMENT OF CIVIL ENGINEERING

ENVIRONMENTAL ENGINEERING LABORATORY

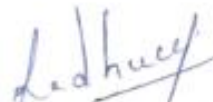
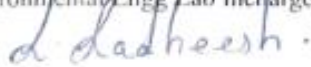
TEST REPORT

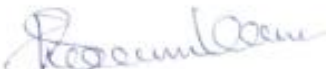
Name of the work : Engineering Campus STP Wastewater Test

Test Sample details:

Type of Sample : Wastewater
Date of Testing : 22.05.23

S.No	Characteristics of Sample	Average Concentration of Sample		Maximum Permissible Concentration
		Before Treatment	After Treatment	
1.	pH	8.6	7.5	5.5-9.0
2.	Sulphates	1.8mg/l	1.2mg/l	2.0 mg/l
3.	Total Suspended Solids	168mg/l	114mg/l	200mg/l
4.	Total Dissolved Solids	166mg/l	98mg/l	200mg/l
5.	Chlorides	52mg/l	34mg/l	50mg/l
6.	Organic Solids	86mg/l	47mg/l	100mg/l
7.	Inorganic Solids	174mg/l	92mg/l	250mg/l
8.	BOD ₅ 5days	167mg/l	37mg/l	100mg/l
9.	COD	276mg/l	127mg/l	250mg/l


Environmental Engg Lab Incharge



HoD/CE
Dr. P. Saravanakumar M.E., Ph.D., P.E.,
Professor & Head
Department of Civil Engineering
Sri Krishna College of
Engineering and Technology
Kuniamuthur, Coimbatore - 641008



SEWAGE TREATMENT PLANT DETAILS

Treatment Plant Capacity = 450 KLD

Total Quantity of sewage water at inlet of aeration tank = 20500 litres / hour

Total plant operation hours = 20 hours

Total treated quantity/ day = 410 KLD


STP OPERATING AND MAINTENANCE INVOICE



Registered
Office:

HAYMAN
ENVIROMENTAL ENGINEERING PRIVATE LIMITED
Excellence we repeat – which is not an act but habit
First Floor A, Sree Kumaran Silver Park, Perundurai main road,
Opp AET school, Vallipurathanpalayam Post,
Erode - 638 112, Tamilnadu
Mobile: +91 94430-10794
Email : haymaninternational@gmail.com, www.hayman.ir
GST No. : 33AADCH9320C122

Duplicate

INVOICE						
INV NO: 055/2023 - 2024				Date : 31.05.2023		
Sri Krishna College of Engineering and Technology BK Pudur, Sugunapuram East, Coimbatore - 641042				Delivery at: Sri Krishna College of Engineering and Technology Coimbatore - 641042		
PO NO: 601 Dated : 19-04-2022				PAYMENT SCHEDULE: 100% advance.		
S.No	Item Description	HSN code	Qty	Unit	Unit Price	Total
1	STP operating and maintainance charges for the month of May 2023	999433	5	Nos	Rs. P 21,250.00	Rs. P 1,06,250.00
					Total Value	1,06,250.00
					CGST @9%	9,562.50
					SGST @9%	9,562.50
					Round off	-
					GST Total	1,25,375.00
/Rupees one lac twenty five thousand three hundred and seventy five only/						
Payment by demand draft at Erode/At par cheque payable at all Branches/RTGS						
Account Name : Hayman Enviromental Engineering Private Limited Account No : 36071676728 Ifsc Code : SBIN0012779 Bank Name : State Bank of India Branch : URC Nagar - Erode				For HAYMAN ENVIROMENTAL ENGINEERING PRIVATE LIMITED  Authorized Signatory		