

EVERY GREAT DREAM BEGINS WITH A DREAMER

The magazine
for those
who care
about the
environment.

G T S

MAGAZINE

*"Western Ghats - The
Great Escarpment of
India."*

UNESCO

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**GTS
ENVIRO
INDIA PVT
LTD**

...engineering for
sustainable environment...

GTS MAGAZINE

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GTS's Innovative Approaches to Environmental Pollution Control and Sustainable Development "

GTS MAGAZINE

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EDITOR'S PAGE



“EVERY GREAT DREAM BEGINS WITH A DREAMER”

Our respected Readers...

Welcome to the Second edition of the magazine of GTS ENVIRO INDIA PVT LTD we are really proud and exuberant to acclaim that we are ready with all new hopes and hues to bring out the second issue , which is going to surely unfold the unravelled world of the most unforgettable and precious moments of us.

The magazine is to be viewed as a launch pad for the persons who care environment. As the saying goes, mind like parachute works best when opened. This humble initiative is to set the creative minds free allowing them to roam free in the realm of imagination and experience to create a world of beautiful environment in words.

Our Magazine is an incarnation of self-respect, love, affection, sensibility; responsibility and compassion which puts the readers into a “State of flow” and makes them genuinely want to learn. We recognize, appreciate, applaud and foster the fine blend of sensibilities in a person changing a negative outlook from drab and demoralized to bright and expectant. This magazine attains its eminence in the first place through the achievement of the people.

The magazine also espouses our spirit which is built up within the endless scope through the collective actions, thoughts and aspirations. All these, I believe would spur higher growth and enterprise in people who care environment.

It gives me immense pleasure to ensure that this magazine has successfully accomplished its objective. This magazine is before you read to the combined efforts of the Editorial Board, I take the opportunity to thank all the contributors as their contribution is the reason that makes this magazine endearing with our readers.

GTS MAGAZINE is a fully open access journal for which you doesn't need to pay. Once published, the contents will be permanently available in our website www.gtsenviro.com for readers to read, download, and share.

Thanks for every one with warm regards,

G.THIRUGNANAM

EDITOR | GTS MAGAINE

CEO | GTS ENVIRO INDIA PVT LTD

TECHNOLOGIES

GTS PROJECTS'S SEWAGE TREATMENT PLANTS

FREQUENTLY ASKED QUESTIONS (FAQ) :

What is Sewage?

Sewage is the wastewater that generated by human beings for their domestic use (toilet, bath, canteen, laundry)

How much Sewage is generated in a residential complex?

The quantity of sewage consumed is estimated as 135 – 200 liters per day per person residing. The total quantity (No. of persons residing X 135 -200 litres) has to be treated in STP within the premises.

What are the constituents of sewage ?

The constituents of sewage will be measured in terms of the following parameters...

PH, BOD, COD, TSS, Oil& Grease, Free Coliform, TDS, NH₄- N, Total N

How the Sewage is treated?

By removing Coarse materials, Oil & Grease, Grits and primary Sludges by Primary treatment, Organic matters by Secondary Biological Decomposition and the Traces of Suspended solids by Sand filters and carbon filters and further Disinfected and Discharged.

Why should Sewage to be treated?

The toilet wastewater and canteen wastewater and hand washing wastewater are generally called as sewage. This has total suspended solids, oil & grease, organic matters (like BOD and COD) more than the allowable limits. If we discharge the waste without any treatment to the ground or any water sources it will pollute the environment. So the sewage has to be treated prior to discharge to the environment to remove the excess organic matter and suspended matters present.

How can treated sewage be re-used/re-cycled ?

The treated sewage water's quality parameters will be less than the statutory Limits. So the treated water will be discharged for Gardening purposes or further the treated sewage will be purified in UF system and/or RO plant and the purified water will be utilised for Toilet flushing and other industrial purposes.

What are all the Technologies / Treatment Systems available for Sewage Treatment?

Primary treatment: Bar screen mechanism, Oil Separator mechanism, Grit removal mechanism, Primary clarifier Raker arm mechanism

Secondary Treatment : Biological Treatment known as Activated Sludge process. Suspended growth Process, Moving bed Biological Contactor (MBBR), SBR (Sequential Batch Reactor), MBR (Membrane Bio Reactor)

Disinfection: by Hypo dosing or Ozonation

Tertiary Treatment

Granular medium filter, Micron filters, Ultra Filtration Systems, Reverse Osmosis plants

What are the problems / troubles occurred in a Running STP and What are the Solutions /Remedies

problems / troubles occurred in a Running STP	Solutions /Remedies
BAD ODOUR in STP Area	Odour will be eliminated by ensuring Successful biological oxidation of Sewage
Treated Sewage water Not Looking Clear	Ensure the biological decomposition of Organic matters, ensure Disinfection and Filtration.
Activated sludge (MLSS) settling is poor in Clarifier	Ensure proper concentration of MLSS in Aeration Tank.
Sludge coming upwards (sludge bulking) in the Clarifier	Contact us (www.gtsprojects.in), (+91 9843030427) directly for further advices to get rid of the problem
Treated water quality doesn't meet the Pollution control board Guidelines. Some values like BOD, COD,TSS are higher than the Permissible limits	Contact us (www.gtsprojects.in), (+91 9843030427) directly for further advices to get rid of the problem.
Sludge handling problem in STP	Contact us (www.gtsprojects.in), (+91 9843030427) directly for further advices how to handle the sludge and to make the operators effective to handle in easiest way to dispose the sludge
Noise in blowers	Sound Attenuator for blower

What is meant by MLSS?

Mixed liquor suspended solids (MLSS) is the concentration of suspended solids that is Activated sludge, in the Bio reactor (aeration tank) during biological oxidation process. Its parameter is measured in milligram per litre (mg/L) or ppm.

What of meant by Activated Sludge process, Sludge Recirculation, FM Ratio?

The biological Treatment system having an aeration tank followed with a settling tank and a Sludge Recirculation of settled sludge in settling tank (secondary clarifier) back to aeration tank is known as Activated Sludge Process.

Ratio between the concentration of Organic matters (BOD,COD,TSS) present in the Aeration tank and the concentration of mixed liquor suspended solids (MLSS nothing but micro-organisms)

What is the operating cost of STP?

OPERATING COST OF STP = 1.5 PAISA TO 3 PAISA PER LIT OF SEWAGE TO BE TREATED.

What are the Parameters of Treated Sewage Water Discharge Standards of CPCB?

Parameters	Parameters limit (Standards for New STPs design after notification date)
PH	6.5-9.0
Total Suspended Solids (mg/lit)	Not more than 20
Total Dissolved Solids (mg/lit)	Not more than 2100
Biological Oxygen Demand (mg/lit)	Not more than 10
Chemical Oxygen Demand (mg/lit)	Not more than 50
NH ₄ -N (mg/lit)	Not more than 5
N – total (mg/lit)	Not more than 10
Fecal Coliform (MPN/100ml)	Less than 100

#sewagetreatmentplant #packagedstp #compactstp #sewagetreatment #MBBR
#PREFABRICATEDSTP

#gtsprojects #zeroliquiddischarge #stpsludgehandling #zld #sbr #mbr #greywatertreatment
#blackwatertreatment #probioticstp #rotatingbiologicalcontactor #rbc #sludgedewatering
#cpcb #sbr #MBR #STPUFRO



Our Environment & Trends

We GTS appreciate the environmental pollution control measures taken in New Delhi city

Environmental protection and control measures in New Delhi, India, have been a major focus due to the city's ongoing air quality and pollution challenges. The government, along with various organizations and initiatives, has implemented several measures to address these issues.

Odd-Even Rule: The Delhi government has implemented the odd-even rule, which restricts the use of private vehicles based on their license plate numbers. On designated days, vehicles with odd-numbered plates are allowed to operate, while those with even-numbered plates are allowed on other days. The aim is to reduce vehicular emissions and traffic congestion.

Air Quality Index (AQI) Monitoring: Delhi has increased the number of air quality monitoring stations across the city. The real-time data collected from these stations helps residents and authorities gauge air quality and take necessary precautions.

Ban on Firecrackers: The use of firecrackers has been banned or restricted during major festivals like Diwali to curb air pollution caused by the burning of fireworks.

Construction Dust Control: Stringent regulations have been put in place to control dust generated by construction activities. Builders are required to implement dust control measures such as sprinkling water at construction sites.

Public Transportation and Metro Expansion: The Delhi Metro has been expanded to improve public transportation and reduce the number of private vehicles on the road. Additionally, efforts have been made to promote the use of electric buses and other forms of public transportation.

CNG Vehicles: Delhi has encouraged the use of Compressed Natural Gas (CNG) as a cleaner alternative to diesel and petrol for public transport and private vehicles.

Greening Initiatives: The Delhi government has undertaken various initiatives to increase green cover in the city, including tree plantation drives and the development of parks and green spaces.

Anti-Idling Campaigns: Efforts have been made to reduce vehicle idling, as idling vehicles contribute to air pollution. This includes awareness campaigns and penalties for idling for extended periods.

Waste Management: Improved waste management practices, including segregation of waste at source and waste-to-energy plants, have been introduced to reduce pollution from landfills.

Public Awareness: The government and environmental organizations regularly conduct awareness campaigns to educate residents about the importance of reducing pollution and taking measures to protect the environment.

Air Quality Action Plans: The Delhi government has formulated comprehensive action plans to combat air pollution, which include emergency measures such as banning construction activities and restricting the operation of certain industries during periods of severe air pollution.

NGOs and Citizen Initiatives: Various non-governmental organizations (NGOs) and citizen-led initiatives are actively working on environmental protection and raising awareness about pollution-related issues.

It's important to note that addressing air quality and environmental concerns in a densely populated and rapidly growing city like New Delhi is an ongoing challenge. Policies and measures may continue to evolve in response to the changing situation and emerging technologies.

UNESCO has recognized the Western Ghats region in India as a UNESCO World Heritage Site due to its outstanding biodiversity

the United Nations Educational, Scientific and Cultural Organization (UNESCO) has recognized the Western Ghats region in India as a UNESCO World Heritage Site due to its

outstanding biodiversity. This designation underscores the importance of conservation efforts in the area and supports sustainable development practices. Here are some of the UN's efforts related to sustainable development and biodiversity conservation in the Western Ghats region:

UNESCO World Heritage Status: The Western Ghats region was designated as a UNESCO World Heritage Site in 2012 under the name "Western Ghats - The Great Escarpment of India." This recognition acknowledges the region's rich biodiversity and unique ecosystems, emphasizing the need for its conservation and protection.

UNDP and GEF Initiatives: The United Nations Development Programme (UNDP) and the Global Environment Facility (GEF) have been involved in projects and initiatives aimed at conserving biodiversity and promoting sustainable development in the Western Ghats. These initiatives often involve collaboration with the Indian government and local communities.

Biodiversity Conservation: The UN has supported efforts to conserve the unique biodiversity of the Western Ghats. This includes the preservation of endemic species, protection of critical habitats, and the establishment of protected areas and wildlife reserves.

Promotion of Sustainable Practices: UN agencies have worked with local communities and governments to promote sustainable agricultural practices, forest management, and eco-friendly tourism in the Western Ghats. These efforts aim to balance economic development with environmental conservation.

Research and Capacity Building: The UN has supported research initiatives and capacity-building programs to enhance understanding of the Western Ghats' ecosystems and to equip local communities with the knowledge and skills needed for sustainable resource management.

Community Engagement: Community-based conservation and sustainable development projects have been implemented with UN support. These projects empower local communities to take an active role in managing their natural resources while also improving their livelihoods.

Awareness and Education: UN agencies have been involved in awareness and education campaigns to highlight the significance of the Western Ghats' biodiversity and the importance of conserving it. This includes school programs, workshops, and public outreach efforts.

Useful & Important GO / Amendments of Statutory

TNPCB

DESIGN AND GUIDELINES OF CHARCOAL UNITS LOCATED IN TAMILNADU BY TNPCB JOINT COMMITTEE IN COMPLIANCE OF ORDER OF HON'BLE NGT

https://tnpcb.gov.in/pdf_2022/CharcoalUnits10322.pdf