

PROJECT BRIEF

Located 40 kms from Bangalore, Gokaldas Images Pvt. Ltd. is an established business house with a state-of-the-art textile factory, dealing in ready-made garments, fashion apparel and designs. It employs a work force of around 400.

The factory planned to implement an on-site domestic wastewater treatment system that is compliant with the Karnataka State Pollution Control Board (KSPCB) standards.

PROJECT OUTCOMES

- •To ensure wastewater is being disposed off safely in compliance with safety standards
- •To improve deteriorating environmental and hygienic conditions due to absence of wastewater treatment or appropriate disposal.
- •To reuse treated wastewater for gardening purposes and conserve fresh water

SYSTEM IN BRIEF

The wastewater streams are channeled from all the sources and collected in a common register near the treatment system, which consists of below modules:

- 1. **Settler:** a sedimentation tank for retaining articles by settling over a specific time frame.
- 2. **Anaerobic Baffle Reactor:** ensures anaerobic degradation of suspended and dissolved solids by mixing fresh wastewater with an active sludge blanket.
- 3. **Planted Gravel Filter:** a tertiary treatment unit, which helps in removal of odour and colour of the wastewater by aerobic processes.

SALIENT FEATURES

Source: Toilets, bathrooms, laundry and urinals Design capacity: 40 m3/d No of users: 500 Peak flow: 8 hours Influent quality: BOD -680 mg/l COD -2,011 mg/l Effluent quality: BOD -4.5 mg/l COD -10.5 mg/l Efficiency: 99%

PROJECT SPECIFICATIONS

Kind of Project: SME-DEWATS for Domestic Wastewater Implementing Agency: L&S Architects Supporting Organization: CDD Society Construction Period: 8 months Start of Operation: 2005

MODULES ADOPTED

Settler

Volume: 32.4 m³ Area of construction: 25.0 m² **Anaerobic Baffle Reactor** Volume: 89.28 m³ Area of construction: 69.2 m² No. of chambers : 6+2 **Planted Gravel Filter** Volume: 97.2 m³ Area of construction: 176.8 m² Plants to be used: Reed juncas , Colacasia **Collection Tank** Volume: 20.0 m³ Area of construction: 20.6 m²



Consortium for DEWATS Dissemination **Society** Survey No.205 ,Opp. Beedi Workers Colony, Kommaghatta Road, Bandemath, Kengeri Satellite Town, Bengaluru, Karnataka 560 060 E : bangalore@cddindia.org P : +91 80 2848 6700/ 2194/ 2274/ 2262 | F : +91 80 2848 2144 | Follow us on (a) @cddsociety (c) /CDDSocietyIndia (c) @CDDSociety



PROCESS FLOW DIAGRAM





Planted Gravel Filter (PGF)

OPERATION AND MAINTENANCE

The wastewater treatment plant is operated and maintained by trained members of Gokuldas Images.

REUSE OPTIONS

The treated water is reused for gardening

A regular schedule is followed for maintenance involving, removal of sludge in the Settler and Anaerobic Baffle Reactor. In the Planted Gravel Filter, regular harvesting of plants is done and the filter media is washed once in five years.

TREATED WASTEWATER QUALITY

Sample points	COD mg/l	BOD mg/l	TSS mg/l	E. Coli CFU/100ml
Date of Sampling: 17/11/06				
Inlet to plant (Inlet to settler)	2,011	680	1,124	1,700
Inlet ABR	82	38	28	2,200
Outlet ABR	36	12.5	16.5	3,100
Outlet to drain*(PGF Out)	10.5	4.5	8.5	1,700