€TRAINING

Wastewater Treatment And Reclamation Technology And Its Practical Management

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Introduction:

Water treatment in our everyday lives and in industry costs billions every year. we will focus on the optimization of water treatment in different applications. Choosing the right water treatment technique or simply choosing no water treatment at all, requires good knowledge of the process and the ability to find the right balance between health & safety and financial considerations. Only under these circumstances can sustainability of any water treatment project be achieved. From a different perspective, water treatment is compulsory when regulatory compliance is required, whereas voluntary water treatment can result in process optimization with the ultimate reduction in costs and improvement in our quality of life.

Course Objectives:

At the end of this course, the participants will be able to:

- Assess their needs and water resources available
- Select appropriate water treatment techniques based on the above data
- Develop relevant monitoring regimes to ensure the effectiveness of treatment
- Apply selected water treatment techniques and optimize their application
- Be aware of technical restrictions in the application of water treatment techniques

Targeted Audience:

- Project managers
- Water treatment engineers/Plant engineers
- Maintenance personnel in the process industries
- Regulatory authorities hygiene and health & safety inspectors
- Facility management companies personnel
- Maintenance personnel in the hotel and catering industry

Course Outlines:

Unit 1: PRACTICAL MANAGEMENT ISSUES:

- Management Issues.
- Good Management Practices.
- Good Operating Practices.

Unit 2: WASTEWATER COLLECTION SYSTEMS:

- Collection Systems - Municipal Industrial.
- System Cleaning and Maintenance.
- Underground Repair and New Construction.
- Lift Stations.
- Equipment Maintenance and Safety Issues.

Unit 3: CONVENTIONAL WASTEWATER TREATMENT SYSTEMS:

- Waste Treatment Ponds.
- Racks.
- Screens.
- Comminutors.
- Grit Removal.
- Sedimentation.
- Flotation.
- Trickling Filters.
- Rotating Biological Contactors.
- Activated Sludge Plants.
- Waste Treatment Ponds.
- Disinfection and Chlorination.
- Sludge Digestion and Solids Handling.
- Plant Safety.
- Plant Maintenance.
- Laboratory Procedures and Chemistry.
- Calculations - Analysis - Records.
- Odor Control.
- Activated Sludge and Waste Monitoring.
- Instrumentation and Support Systems.

Unit 4: MUNICIPAL WASTEWATER RECLAMATION:

- INDUSTRIAL WASTEWATER
- Nature of Waste Water from different Industries.
- Monitoring Techniques.
- API Separators.
- Conventional Industrial Treatment Systems.
- Panic Ponds.
- Chemical Treatment.
- Customized Activated Sludge.
- Petrochemical Waste Water - Special Considerations.

Unit 5: INDUSTRIAL MUNICIPAL WASTEWATER RECLAMATION STRATEGY:

- The Problem.
- The Systematic Study of the Problem.
- The Pilot Plant Techniques.
- Study for your Waste Water,
- Preparing Chemical Resistant Activated Sludge.
- Pilot Plant Results Analysis.
- Scaling Up.
- Design of Waste Water Treatment and Reclamation Plants.
- Ion Exchange Softeners.
- Finishing Treatment for Reclaimed Water.
- Special Chemical Additives for particular reuse applications.
- Monitoring and Operation of Reclamation Facilities.
- Special Precautions, Problems, and Solutions with Reclaimed Water use.