



WATER AND WASTE WATER MANAGEMENT

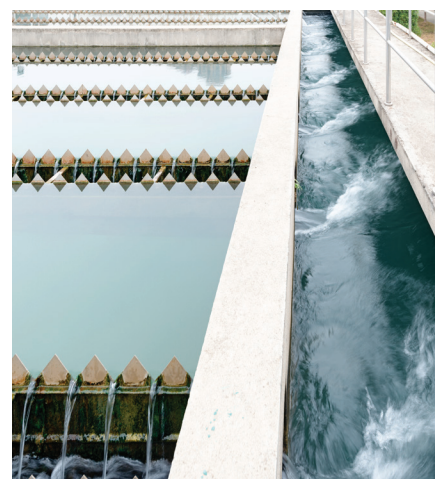
INNOVATIVE CUSTOM DESIGNED AND BUILD INDUSTRIAL TREATMENT PLANTS

TOSL has expertise & capabilities in providing Industrial Wastewater Treatment Solutions for:

- Distilleries
- Beverage
- Pulp & Paper
- Petrochemical Plants
- Oil & Gas Industries
- Chemical Processing Plants
- Breweries
- Meat Processing
- Sugar Processing
- Pharmaceutical
- Palm Oil Processing
- Dairy
- Food Processing
- Metal Processing
- Refineries
- Power Plants
- Yeast Processing

Municipal Waste System would include:

- Pre Treatment
- Biological Treatment using:
 - Activated Sludge Process
 - SBR
 - MBBR
 - Bio Filters
 - Biological Nitrogen Removal (BNR)
 - Biological Phosphorus Removal
 - Sludge Treatment and Dewatering
 - Tertiary Treatment for Reuse Quality
 - Instrumentation and Controls
 - SCADA & Telemetry Systems





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SEWAGE & INDUSTRIAL WASTE TREATMENT

TOSL caters to both municipal and industrial segments by supply & implementation of projects and systems as listed below:

- Modular, compact package type wastewater & sewage treatment plants
- Small community, municipal sewage treatment by adopting different technologies to meet discharge requirements or to generate reuse quality water for industrial or irrigation sectors
- Industrial wastewater treatment systems—by adopting most suitable treatment depending upon the influent Chemical Treatment, Aerobic Pretreatment for high BOD and COD waste; Aerobic Treatment, Tertiary Treatment for Recycle Reuse or zero discharge Systems
- Renewable bio-energy systems, utilization, purification of bio-gas for utilization as a fuel suitable in boilers, gas turbine, or other suitable application like fuel for fork lifts etc. in the industry

RECYCLE, REUSE AND ZERO DISCHARGE SYSTEMS

TOSL offers advance treatment for both municipal and industrial segments to reuse and recycle quality water generation. Systems offered are:

- Membrane Systems like UF, Nano & Ultra Filtration
- De Mineralization Units
- Electro Oxidation System
- Multi-effect Evaporation for Zero Discharge
- Disk type RO units for cleaning high TDS, Silica, BOD and COD for high rate of recovery

Waste water treated by our system can be reused as process water, make up water for cooling plants, boiler feed water, and irrigation purposes.



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SMART TURBIDITY

The SMART Turbidity monitor accurately analyses the cloudiness of a fluid and outputs the turbidity value in NTU.

Applications

- Sewage Treatment Plant Monitor
- Brewing Quality Monitor
- Groundwater Effluent

By utilising the "Smart Cell" Detector Array Technology, developed by Rivertrace, the monitor accurately analyses the quality of the sample stream and outputs the turbidity value in nephelometer turbidity units (NTU). Turbidity is the cloudiness or haziness of a fluid caused by large numbers of individual particles.

Autoclean > The autoclean option has been designed to ensure that the measuring cell glass tube is kept free from fouling. Cell fouling is recognised as a leading cause of monitor malfunction. Fitting the Autoclean removes the need for the ship's crew to remember to clean the cell manually.

A manual cell cleaning device is included as standard to easily enable routine maintenance and prevent Optical cell fouling which is recognised as a leading cause of monitor malfunction or incorrect reading. By simple operation of the manual cleaning device, the measuring cell remains in optimum operating condition.

Calibration Check > The monitor's calibration can be checked using our calibration check kit. This is an approved method of demonstrating that the unit is still working correctly.



RIVERTRACE
ENGINEERING



"Smart Technology, Smart Thinking"



WATER AND WASTE WATER MANAGEMENT

WASTEWATER PROCESSES: PRODUCTS

Wastewater Sources

Ultrasonic Level Control

Pump Station Control requires monitoring of water level in the wet well. Level, volume, flow and the pump need to be controlled continuously.

Wastewater Intake

Open Channel Flow

Open Channel flow monitoring requires highly accurate data of influent flow to meet regulatory demand.

Biological Treatment

Magnetic Flow Meters

The ratio of Return Activated Sludge (RAS) to Waste Activated Sludge (WAS) is critical and may be controlled using Magnetic flow meters.

Digester

Level Control

Level control in the digester is critical.

Sludge Collection

Radar Level

The inventory level of chemicals used for the wastewater process must be monitored and the dosing controlled.

Disinfection

SITRANS Pressure Transmitter

The filter back-wash operation is carried out using head loss measurement across the filters using differential pressure transmitters.

Dewatering

Ultrasonic Level Measurement

Dewatering is typically a mechanical process, in which the sludge level must be controlled to prevent damage to the press.

Sludge Disposal

Belt Scales

The sludge from the dewatering press is transported via belt scales or by a screw conveyor, protected by motion sensors.

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CONTROLS & AUTOMATION

Service: Control Panel design & Integration

Products: SIRIUS Industrial Controls components (Sirius Control, Sirius, Hybrid, Sirius Monitor, Sirius Command)



SIRIUS Control

IEC Switching & Protecting



SIRIUS Hybrid

Solid State Starting



SIRIUS Monitor

Monitoring, motor management, safety, communication



SIRIUS Command

Commanding and Signaling



VFD's - SINAMICS G120X

Selection and planning of drive engineering

The new infrastructure drive SINAMICS G120X is the perfect choice for pumping / ventilating in your wastewater application. This drive covers all voltage ranges from 0.75 to 630 kW in nine sizes and works in all voltages and supply networks.

SIEMENS



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SITOP Power Supplies

24 volts nonstop – with each SITOP power supply



SITOP – The heart of automation®

Thanks to their high reliability, our SITOP power supply units are globally recognized for their high reliability and for their coping with critical network conditions. Our full range of switched-mode power supply units provides a controlled 24 V DC power supply and other input voltages. Our unique spectrum of DC UPS and add-on modules extends our power supply range to protect the 24 V supply against mains problems and problems on the DC side. SITOP is also top-notch when it comes to efficiency, thanks to an efficiency rating of up to 95%, for example, tools to make product selection and ordering quick and easy, and comprehensive support for your design processes. And in terms of integration, complete integration in Totally Integrated Automation and the TIA Portal via PROFINET gives you unique opportunities for engineering and diagnostics. Top integration. Top efficiency. Top reliability. SITOP

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