Please refer to page 7 for selection details

Water
Quality Analysis

Total Organic Carbon
TOC

Overview

The TOC sensor employs advanced deep ultraviolet (UV) LED cold light sources, featuring long lifespan and minimal drift. It utilizes internationally recognized technology and a highly accurate UV absorption method that has been validated. No sample pretreatment is required, enabling rapid reaction analysis without the need for reagents or sampling equipment. The sensor incorporates mechanical self-cleaning functionality and utilizes a 550nm compensation light source to effectively eliminate the impact of turbidity and color on measurements.

Function Characteristics

- LCD Chinese interface display, Chinese menu, easier and more convenient operation
- Good reproducibility, unaffected by sample flow rate and pressure
- 4~20mA transmission output, relay high and low alarm control output, RS485 communication output and other variable outputs, system intelligent control
- Dual relay upper and lower limit alarm output (optional)
- Fully intelligent, multifunctional, high measurement performance, and strong environmental adaptability
- Support customization of special functional requirements

Application

Widely used in wastewater treatment, swimming pools, secondary water supply, cooling towers and other systems, as well as in electronic, electroplating, printing and dyeing, chemical, food, pharmaceutical and other process fields, it has shown outstanding performance in large-scale sewage treatment plants, industrial process monitoring and other applications.

Product Model

Product Model	TOC-S1	TOC-S2
Product Image		
Display	LCD color screen	LCD screen
Measurement Range	0~300mg/L，0~1000mg/L	0~300mg/L，0~1000mg/L
Resolution	0.1mg/L	0.1mg/L
Output	4~20mA、Relay (optional)	4~20mA、Relay (optional)
Communication	RS485, HART protocol (optional), NB-GPRS.LORA communication (optional)	RS485, HART protocol (optional), NB-GPRS.LORA communication (optional)
Power Supply	AC220、DC24V、 Input power ≥ 5W	AC220、DC24V、 Input power ≥ 5W
Protection Level	IP65 (host)/IP68 (sensor)	IP65 (host)/IP68 (sensor)
Operating Temperature	0~60 ℃ (non freezing)	0~60 ℃ (non freezing)
Storage Temperature	-10~60℃	-10~60℃
Overall Dimensions	Wall mounted 156mm×150mm×85mm	100x100x150.5mm
Installation Opening	Wall mounted 156mm × 94mm	Disk mounted 92.5x92.5mm
Cable Length	Standard 10 meters (customizable extension)	Standard 10 meters (customizable extension)
Installation Method	Top type/Top flange type/Side wall type/Pipeline type/Immersion type installation	Top type/Top flange type/Side wall type/Pipeline type/Immersion type installation

Total Organic Carbon (TOC) Analyzer Electrode Series

Measurement Principle:

TOC analysis is an analytical method that converts all organic carbon in a water sample into carbon dioxide (CO2) through chemical oxidation, and accurately detects the amount of CO2 to calculate the total organic carbon content in the water sample.

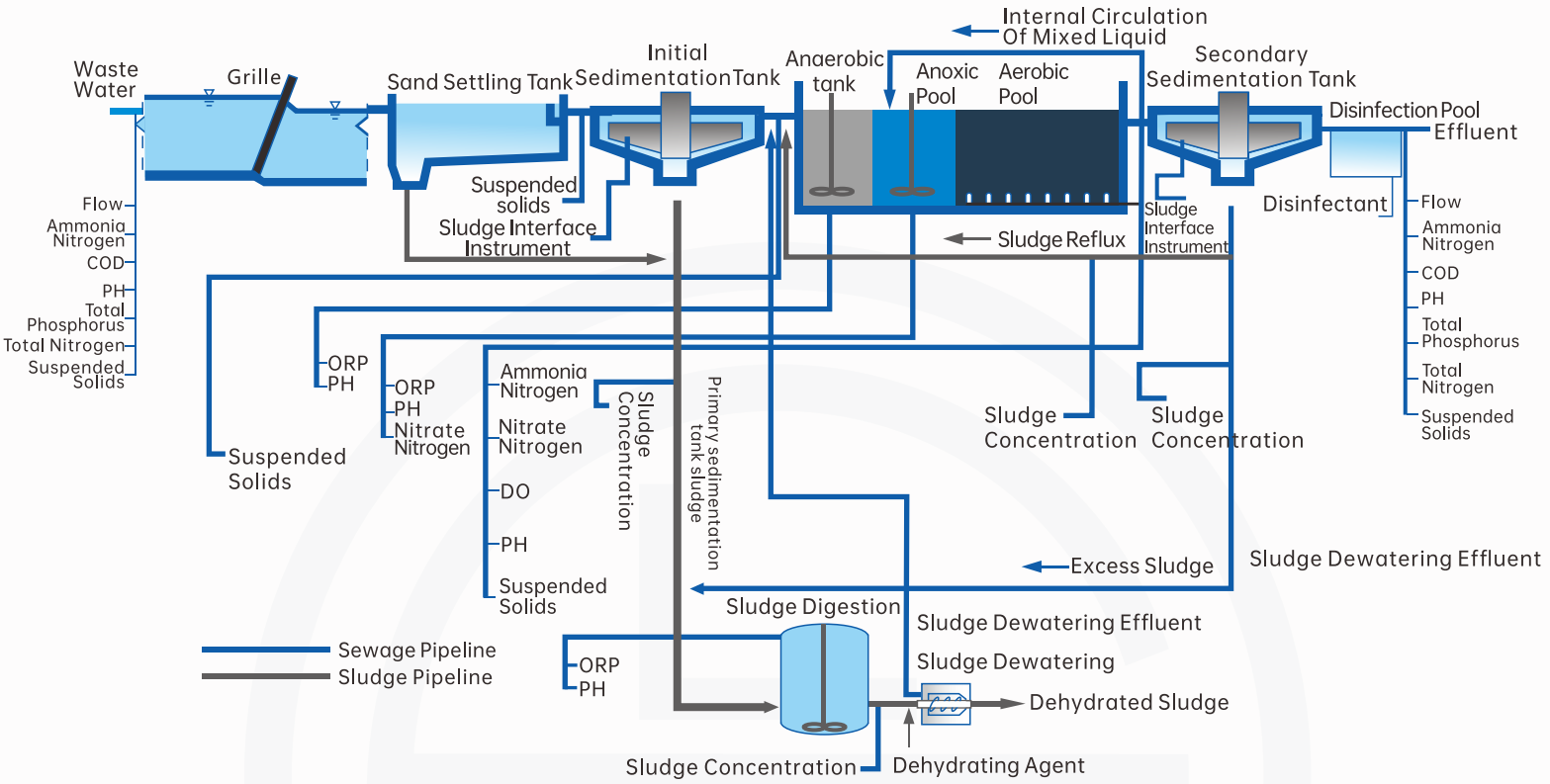
Structural Features:

Structural features: The entire measurement system mainly consists of three parts: instruments (secondary instruments), TOC electrodes (primary instruments), and measuring flow cups. The TOC electrodes are in contact with the measured aqueous solution, and the instruments display the TOC value and working status of the aqueous solution.

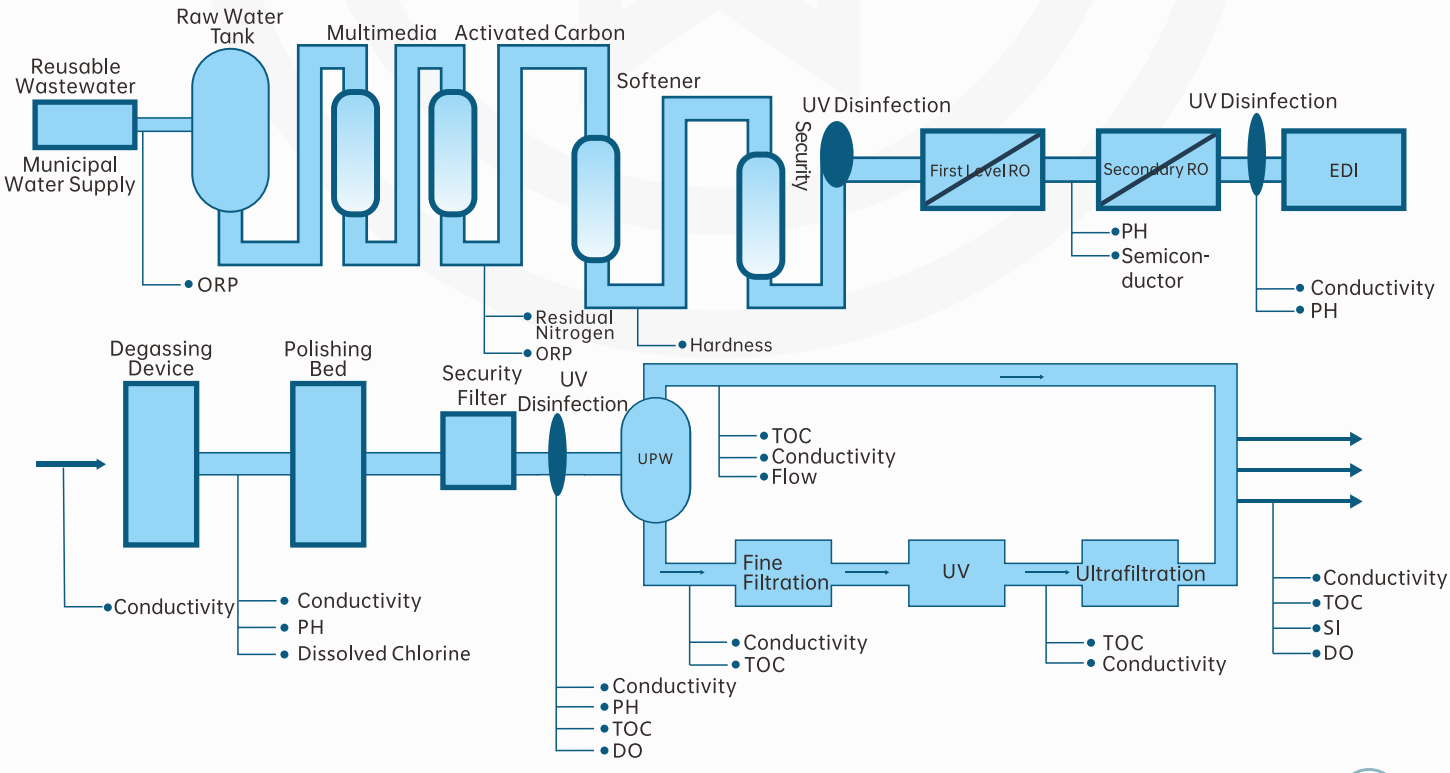
Product Model

Product Model	B1 TOC measuring electrode
Product Image	
Testing Scope	0~300mg/L，0~1000mg/L
Temperature Range	0~60℃
Resolution	0.1mg/L
Output	RS485
Thread	M20*1.5
Output	RS485
Thread	3/4NPT
Electrode Material	ABS+304
Line Length	10m

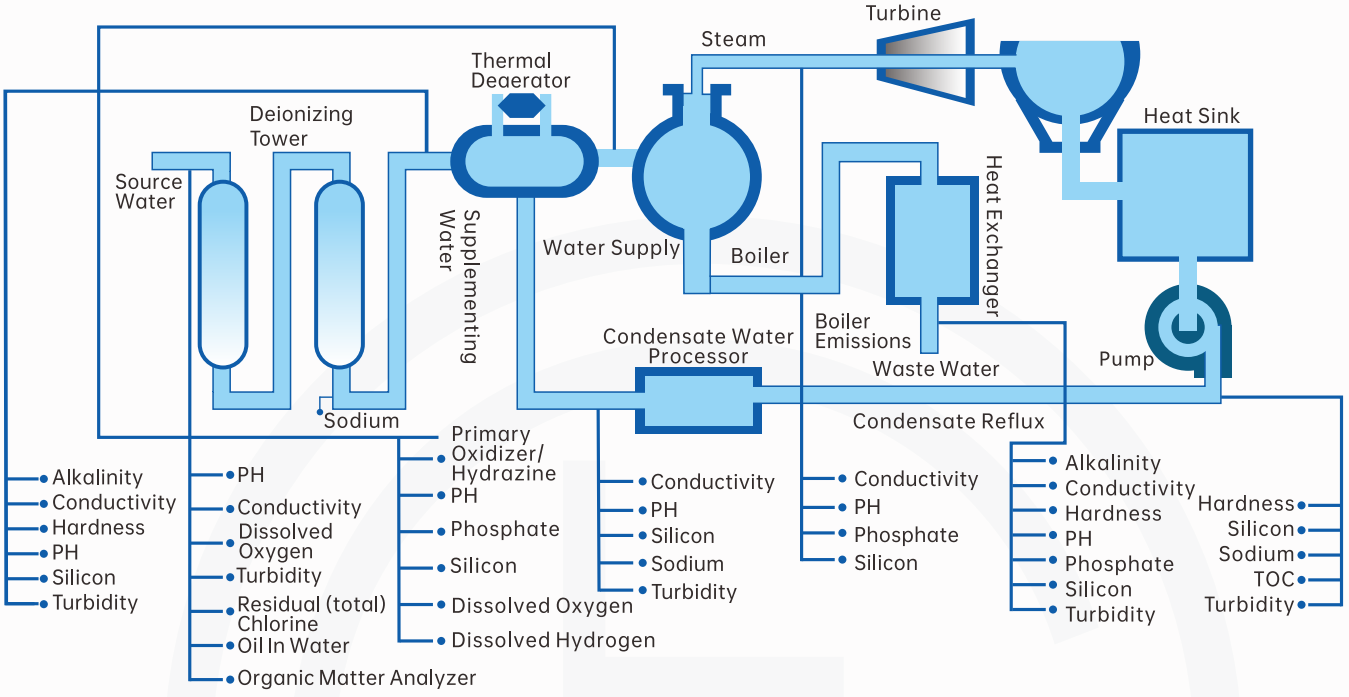
Sewage Treatment Process Diagram



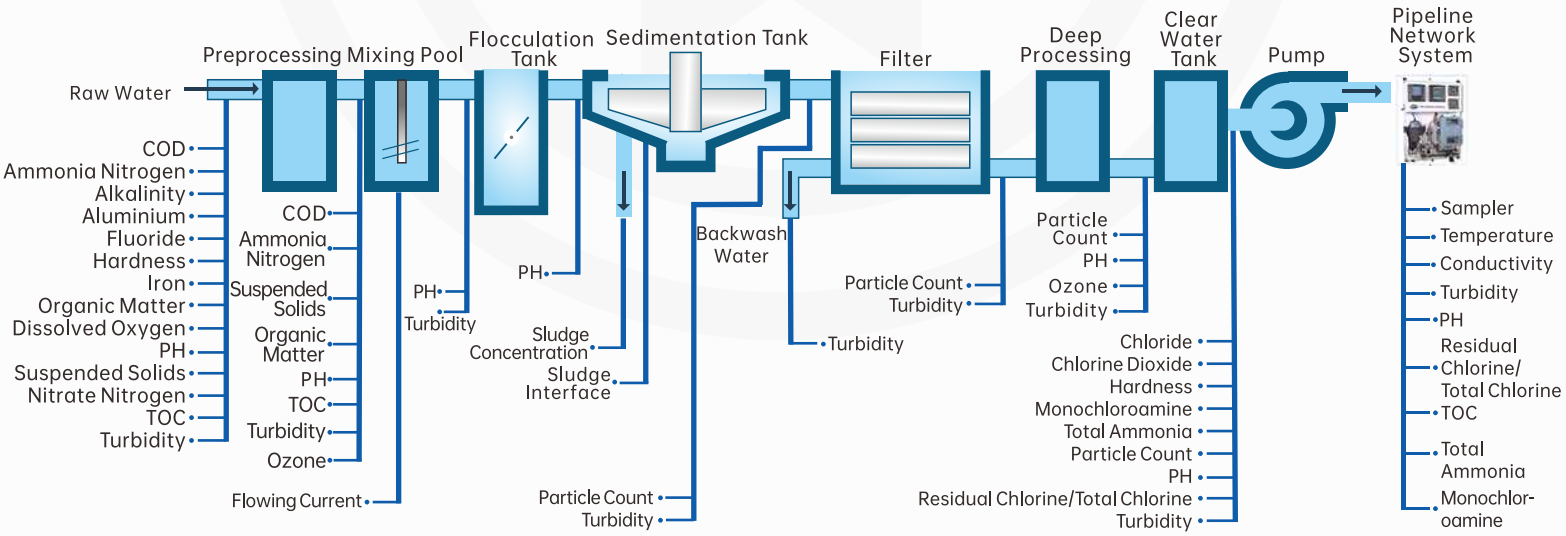
Electronic Industry Water/Wastewater Reuse Process and Water Quality Monitoring Plan



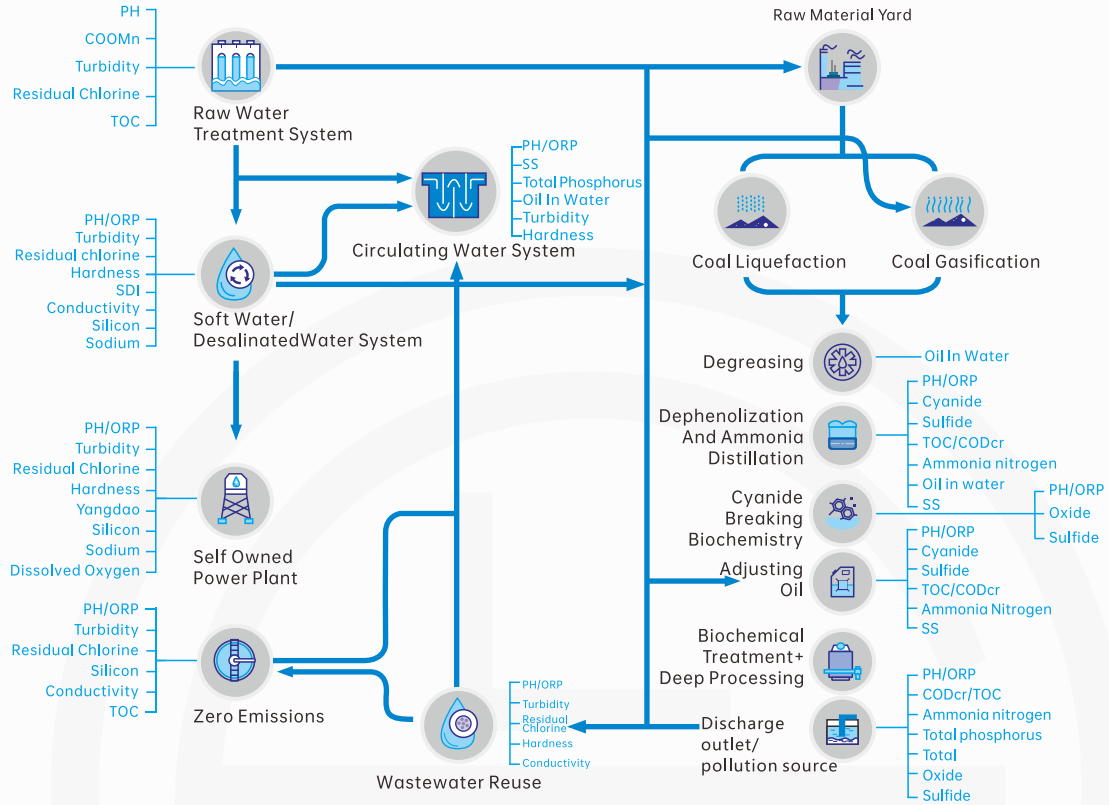
Boiler Water Flow Diagram



Drinking Water Treatment Process Diagram

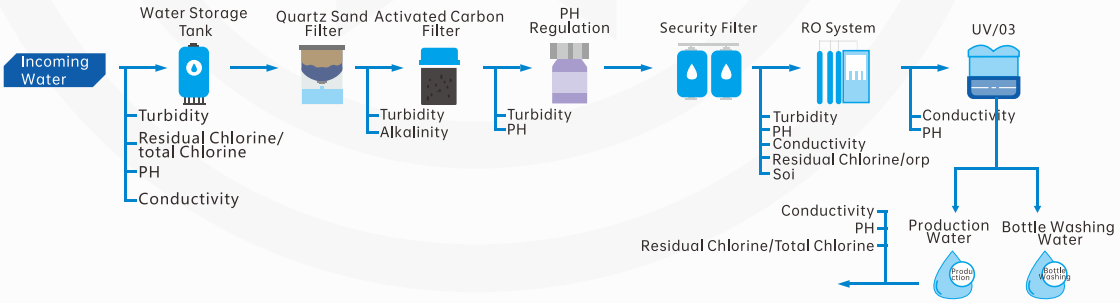


Petrochemical Environmental Water Treatment Process Diagram

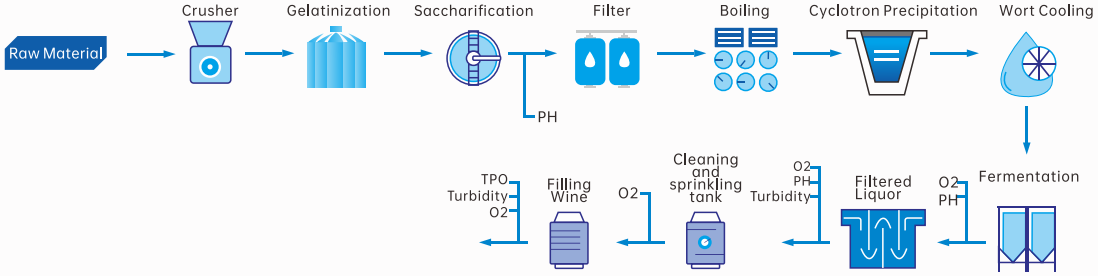


Wastewater Treatment Process And Water Quality Monitoring Plan For The Beer And Beverage Industry

Process Flow Of Beer Beverage Raw Water Pretreatment



Beer Water Usage Process



TOC Analysis Selection Composition

Example Of Selection TOC-

B1	S1	N	M	A	N	S	F	H	L
Required 1	Required 2	1	2	3	4	5	6	7	8

Electrode Model (required)	B1	TOC measuring electrode
	T( )	Other electrodes
Transmitter Specifications (required)	S1	LCD color screen
	S2	LCD screen
	N1	No need for transmitter, only electrodes are optional
1. Range Of Measurement	N	0 ~ 300mg/L
	U	0~1000mg/L
	T( )	Other range of measurement
2. Resolution	M	0.1mg/L
	T( )	Other resolutions
3. Output Signal	A	4~20mA
	B	4~20mA+RS485
	C	4~20mA+RS232
	T( )	Other output signals
4. Material	N	ABS+304
	T( )	Other materials
5. Power Supply	S	24VDC
	V	220VAC
6. Protection Level	E	IP65
	F	IP68
	T( )	Other protection levels
7. Cable Length	H	10m
	I	5m
	G	15m
	T( )	Other lengths
8. Install Interface	L	M20*1.5
	T( )	Other installation interfaces

Explanation:

The total organic carbon (TOC) analyzer adopts an LCD color screen and is equipped with TOC measuring electrodes. The range is 0-300mg/L (ppm), the resolution is 0.1mg/L, the output signal is 4-20mA, the material is ABS+304, the power supply is 24VDC, the protection level is IP68, the cable length is 10m, and the installation interface is M20 * 1.5.

Product Certification

Compliance and approval; The Ludwig water quality analyzer meets key standards and certifications for process measurement technology; To ensure the highest reliability in such settings;