



Water! There is no alternative to this! What you don't know about water can cost you plenty. What you learn about water can save you lots! Many have predicted that water will be the oil of the future as clean/usable water becomes more valuable and scarcer and the next world war will be for Water. Dispute over water resources are increasing day by day. Water treatment is the piece of the puzzle as it relates to properly managing and using this ever\(\mathbb{M}\)important scarce resource. Water treatment is like a chain. Every link should be strong enough to give you uninterrupted supply of enough treated water of right quality when you need it and at lowest "Life Cycle Cost".

Water treatment is a complex subject. Water treatment is not taught in schools and colleges as a regular subject. Many companies treat water as Ionic does. But we treat water – "Differently". Water is a utility and like electricity and gas, the more efficiently it is used, the more money is saved. Why is water many times ignored? Water is assumed to be cheap and available in plenty. But if you know the true cost of water, you will realize that it is not cheap! Water's true cost is more than what shows up on the water and sewer bills received each month. The true value of water includes Cost of raw water -Cost of water treatment - Cost of waste water treatment. Cost of capital equipment Cost of energy lost through water -Cost of productivity lost through water, cost of maintenance, cost of labour, cost of consumables, power, chemicals etc.





ABOUT COMPANY

Ionic Engineering Technology Pvt. Ltd. is a professionally managed ISO-9001/2015 company by people with over 33 years of hardcore experience in water and waste water treatment. Ionic is dedicated to the design, engineering, manufacture, supply, service and maintenance of water and wastewater treatment plant and equipment. We provide a one-stop shop for integrated water and wastewater treatment needs, and focus on providing the optimum solution for every client's need.



Now it is 20 years since Ionic Engineering Technology Pvt. Ltd. started operations with the main focus on technology, quality and performance related to water and waste water treatment solutions. The single purpose was to "Remove Everything from Water - Except "Hydrogen & Oxygen" and give customers "Peace of Mind" and not a "Piece of Equipment". We wanted to make a difference to the way you treat water and waste water and hence we state "We Treat water - Differently".

When we started, we did not want to be known just as another vendor or supplier and rather as a business partner and solutions provider who is interested in understanding correctly the end user requirement and offer a technomeconomical value engineered right solution. In this, we have a selfish interest too! - Only in the customers wellbeing we can flourish!



OUR VISION **HELP CREATE A LIVABLE PLANET**

To Supply and implement solutions which meets and exceeds the needs and expectations of our clients by continuously providing them the solutions to reduce their water foot print and life cycle cost of water and waste water treatment by research and development(R&D) on new processes, technologies and products. To help customer understand the True Cost of Water and help them take an informed decision to reach their sustainable goals.



OUR MISSION TO TREAT WATER "DIFFERENTLY"

IONIC will be a performance oriented and customer centric company to present globally. Increasing our footprint and market share Year On Year (YOY) in the markets we operate. Be one of the best solutions provider with innovative solutions which will be different, stimulating and productive, and one that can significantly reduce technical risks and costs, ensuring maximum returns to our customers and shareholders. Provide cutting edge disruptive water and waste water treatment technologies that will be unique, cost effective and provide value for money!



WATER EFFICIENCY



Water is the most valuable resource on our planet. That's why efficiency and quality are top priorities for the water industry. These goals are becoming increasingly difficult to achieve as the expense of providing clean water grows in many regions, while at the same time operations have to be as efficient and economical as possible. The consistent, end-to-end digitalization of plants and processes helps the water and waste water industry meet these challenges. Industry 4.0 encompasses a promise of a new industrial revolution—one that marries advanced manufacturing techniques with the Internet of Things to create manufacturing systems that are not only interconnected, but communicate, analyze, and use information to drive further intelligent action back in the physical world. Ionic will focus on IIoT enabled system with real time remote monitoring which will help our customers meet present and future manufacturing challenges and be more efficient!

With the ever increasing scarcity of water and stringent waste water discharge norms, many of us consider this as a serious problem and not as a good opportunity to clean up our act! Most of us talk about 3R's – "Reduce, Recycle and Reuse" but do not know how and where to reduce, how and what to recycle and how and where to reuse! To get a solution to the above, isolated approaches does not help. What one has to adopt is an integrated step by step approach. Many a times we have seen non availability of water and waste water treatment disposable problems hampering the industrial operation including a threat of closure and hurdle for expansion. Non availability of potable water will lead to migration of human population as well as affect agriculture and industrial growth! If water is available it may be available at considerable cost and of poor quality requiring expensive and complicated treatment. Water is a utility like electricity and fuel, the more efficiently it is used, the more money is saved. To mitigate the problem of water scarcity IONIC offers innovative solutions with which industries can reduce their "Water Foot print".

Water and waste water treatment is important. But more important is how efficiently water and waste water is being treated. The right question to ask is "What is the True Cost of Water? Water and waste water treatment is often taken for granted and technology, quality, performance, monitoring, operation and maintenance is ignored resulting in poor performance, repeated failures, high power consumption, high chemical cost, high maintenance and cleaning cost, wastage of water etc. Most of the time the management is not aware their pot is full of holes and their money is leaking like water! Unfortunately, the management does not understand their profitability depends on efficient manufacturing operations and does not ask questions as to how efficient and sustainable their manufacturing process is.





- In Expertise we provide.
- In Technology we offer. In User friendly products.
- In Peace of mind you get.

- In Business ethics we follow.
- In Quality we design.
- In Value for money you get.
- In Experience we have.



TECHNOLOGY

EVOLVING FOR A CLEANER, BETTER FUTURE. BE FUTURE-READY!

There are many water and waste water challenges still to be overcome! Though there is constant upgradation of traditional technologies new disruptive technologies are getting introduced slowly to meet present and future challenges. Some technologies even though good is not commercially viable. Further development has to take place to make it techno commercially viable. Traditional technologies which are inefficient and consume more chemicals, water, power and labour should be avoided and more environment friendly electrical driven non chemical process technologiesto be welcomed. Ionic will work with its customer to adopt new technologies that will make water and waste treatment simple, effective, reliable and flexible and reduce the total cost of ownership. Industries need to focus on quality and deliverables than initial cost and need to be more efficient in manufacturing. The decision making process must change to consider the long term impact on manufacturing cost. The decision maker should understand that he is creating an invaluable asset to his company and his understanding of his decision whether good or bad will affect the final cost of product! Those who change and reorient their decision making process will be winners and those follow the traditional way will loose out!



We are dedicated to using our professional expertise accumulated over many years, to providing the solution you want, when you want it. We also take great pride in ensuring that every client is satisfied with the operating efficiency of the systems we design and the overall level of service that we provide, whether during the initial contract phase or later, throughout the life of the plant.

- Providing expert advice, tailored to meet your requirements.
- Supplying high quality, good value-for-money systems and equipment.
- Supporting all our clients for the lifetime of their water & wastewater treatment systems.
- Developing and deploying the best, most economic solutions for your needs.
- Listen to our customers as well as our suppliers on products and technologies feedback and updates.
- Continuous improvement in all that we do.



OUR SERVICE



Ionic Engineering Technology Pvt. Ltd. specialize in providing cutting-edge solutions for water and wastewater treatment, tailored to meet the needs of industrial clients. Our advanced water treatment systems are designed to purify and condition water for industrial processes, ensuring optimal efficiency and compliance with stringent quality standards. We also offer robust wastewater treatment solutions, enabling industries to treat effluents in accordance with environmental regulations for safe discharge or reuse. One of our hallmark services is the implementation of Zero Liquid Discharge (ZLD) systems, which allow for complete wastewater recycling and reuse, eliminating liquid waste and fostering sustainability.

In addition, we provide top-of-the-line chlorine dioxide generator systems that ensure effective water disinfection, microbial control, and biofilm removal, maintaining superior water quality. With our expertise spanning industries such as automotive, aerospace, chemicals, petrochemicals, power generation, food and beverages, pharmaceuticals, cosmetics, and pulp and paper, we are dedicated to delivering innovative, reliable, and efficient solutions. As your trusted partner, we are committed to addressing your critical water management challenges with excellence and integrity.

- Water Audit & Consultancy
- System Modification & Upgradation.
- Maintenance Service
- Consumables & Spares
- Trunkey Project For Water & Wastewater Treatment
- Remote Monitoring System
- o AND MORE.....



OUR CLIENTS



































































+ AND MORE....



OUR SYSTEMS



I-DOSE SMART DIGITAL CHEMICAL DOSING SYSTEM

IONIC offers Skid mounted "I-DOSE" Smart Digital Chemical Dosing Systems. Intelligent smart digital dosing pumps the heart of the system ensures accurate dosing of process chemicals ensuring process safety, equipment safety and operator safety. Pumps and accessories are available in PVC, PP, PVDF and stainless steel.

- Dosing skids in PP-H
- Dosing tanks in LDPE, SS,PP, PVC, FRP etc.
- Dosing pumps from 0.01-200 LPH
- Tank low level switch
- Foot valve, injection valves, tubing
- Control cables for automation



I-DOSE-CT- EASY COOL CONTROL

SMART DIGITAL DOSING SYSTEM FOR COOLING TOWER CHEMICAL DOSING AND CONTROL

IONIC offers Skid mounted "I-DOSE" IoT enabled Smart Digital Chemical Dosing Systems of various capacities and material of construction for cooling tower water treatment. Application specific IoT enabled process controller with Real Time Remote Access cloud platform is integrated with dosing pumps to implement chemical dosing and control protocol. Intelligent smart digital dosing pumps the heart of the system ensures accurate dosing of scale and corrosion inhibitors, biocides, deposit control polymers and other process chemicals ensuring process safety, equipment safety and operator safety. Pumps and accessories are available in PVC, PP, PVDF and stainless steel.







CHLORINE & CHLORINE DIOXIDE DOSING SYSTEM

Set it, Get it and Forget it!

IONIC offers Skid mounted pre-engineered "I-DOSE" Smart Digital Chlorine & Chlorine Dioxide Dosing Systems. Intelligent smart digital dosing pumps the heart of the system ensures accurate dosing of process chemicals ensuring process safety, equipment safety and operator safety.

- Dosing skids in PP-H
- Dosing tanks in LDPE, SS,PP, PVC, FRP etc.
- Dosing pumps from 0.01-200 LPH
- Tank low level switch
- Foot valve, injection valves, tubing
- Control cables for automation
- Online Free/Total Chlorine and Chlroine Dioxide analyser with PID control output
- • Optional IoT enabled real time remote access



GENOX SMART DIGITAL CHLORINE DIOXIDE GENERATORS

SMART DIGITAL DOSING SYSTEM FOR COOLING TOWER CHEMICAL DOSING AND CONTROL

What you can't say from it's name. IONIC realized disinfecting water properly is as important as treating water and is offering a unique and cost effective solution for water disinfection. We manufacture fully automatic Chlorine Dioxide generators for water disinfection. CLO2 is 2.5 times more powerful than conventional Chlorine and is very effective in wide pH. ClO2 also oxidises heavy metals like Iron, Manganese and widely used for cooling water microbial control, paper making, food and beverage and pharma water treatment systems. Traditional generators for small capacities up to 500 gms/h and under water submerged generators for medium and large capacities are available.









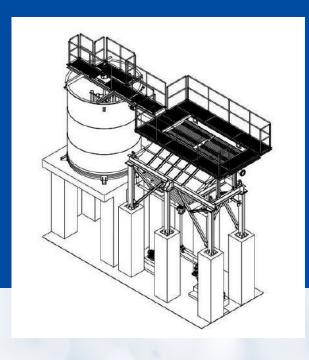


LAMILLA CLARIFIER

Small in size- Big In performance

lonic's Lamella Plate Clarifier ensures laminar flow for uniform hydraulics and high effluent quality, significantly reducing space requirements and enabling compact, relocatable setups. Its inclined overlapping plates enhance surface settling efficiency, making it ideal for point-source treatment. Ionic also offers various clarification technologies, including clarifiers, clariflocculators, reactivator clarifiers, tube settlers, and lamella clarifiers, tailored to project-specific needs for effective TSS and turbidity removal.



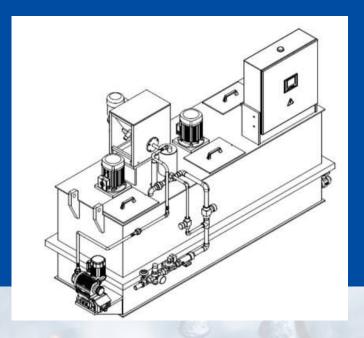


POLYMIX DOSING SYSTEM

BETTER MIX POLY ELECTROLYTE PREPARATION SYSTEM

Fully automatic liquid and solid poly electrolyte preparation system with PLC control. Batch system, continuous 2 compartment and 3 compartment system complete with PP mixing, dilution and maturation tanks, dosing system, level controls, screw feeder for solid poly electrolytes and metering pumps for liquid emulsion poly electrolyte.







TURBILOC ® ACTIVE MULTIMEDIA FILTER

Is a direct replacement for sand filter, doubling the performance of sand filters without the need of additional investments in infrastructure. TURBILOC ® resists biofouling, bio-coagulation and transient wormhole channeling of unfiltered water and never needs to be recharged or replaced. Turbiloc filter and Turbiloc Plus filters are highly engineered systems in which the media, system design engineering, media retention system, back wash procedure, process control and monitoring work in tandem with each other to provide unparalleled filtration performance. Each system is tailored to meet a particular feed water characteristics and to give desired filtration performance. Can handle up to 400 ppm TSS. TSS and Turbidity < 5 ppm/NTU is easily achieved. Fully automatic and semi automatic models are available.



"NEXT GENERATION" MULTIGRADE SAND & ACTIVATED CARBON FILTER

Filter uses carefully selected and mixed grade of filter media for effective filtration of water having turbidity up to 25 NTU. The filter unlike conventional pressure sand filters uses "VARY VOID" principle for depth filtration and operates at higher specific velocity and needs back wash once a day. They also consume less amount of water during backwash operation. Automatic and manual versions are available. Various sizes are available to meet low flow and high flow requirements.



WATER SOFTENERS

QUICK CYCLE" WATER SOFTENERS WITH "SALT SAVING TECHNOLOGY"

For producing soft water having very low level of residual hardness. Unlike competitive conventional softeners our units consumes 30% lower salt during regeneration and thus giving our customers a green solution for softening water. Quick Cycle softeners utilize 5 th generation premium resin technology combined with innovative engineering design to get full benefits. Advanced Multiport valves are supplied for trouble free performance.





OIL LOC®

Oil Separation Filtration Unite

Oil-Loc is an innovative oil separation plant designed to effectively remove oil contaminants from industrial wastewater. The system employs cartridge filter technology, ensuring superior separation of oil and water. With applications across industries like food & beverage, petrochemical, automotive, aerospace, and surface treatment, Oil-Loc ensures that effluent is treated to meet environmental discharge or reuse standards. Its compact, skid-mounted design makes installation and maintenance straightforward, while its robust, corrosion-resistant construction ensures long-term operation in harsh industrial conditions. Oil-Loc is engineered to handle varying oil loads, offering high capacity for both steady and fluctuating demands.



SILICA-LOC®

Silica Removal System

Silica-Loc is a specialized filtration system designed to efficiently remove silica from water, ensuring the production of high-quality water for a wide range of industrial applications. It uses advanced filtration technology to provide consistent and reliable silica removal, making it ideal for industries such as power generation, pharmaceuticals, semiconductor manufacturing, and water treatment. The system minimizes silica scale formation, which can cause damage to equipment and reduce operational efficiency. Silica-Loc is a compact, modular system, designed for easy installation and minimal maintenance. Its low water rejection ratio reduces waste, and robust materials ensure a long operational life. The system is highly efficient, making it a cost-effective solution for industries requiring high-purity water.



AMOLOC®

Ammnia Removal system

lonic's Ammonia Removal System is a highly efficient treatment solution designed to remove ammonia from water, ensuring safe and clean discharge or reuse. Ammonia is a common contaminant in industrial and municipal wastewater, and its removal is critical to meet environmental regulations and protect aquatic ecosystems. The system employs advanced technologies, offering both cost-effective and sustainable solutions for ammonia treatment. It is ideal for industries such as power plants, agriculture, aquaculture, and municipal water treatment facilities.

The system works by selectively targeting ammonia, breaking it down into less harmful compounds, and ensuring treated water meets the required quality standards. It can be customized to meet specific operational conditions and is designed for both small-scale and large-scale operations.





QUICK CYCLE FULLY AUTOMATIC DEMINERALIZERS

Small in Size-Big in Performance

IONIC offers its unique skid mounted compact, pre-engineered Fully automatic PLC controlled "Quick Cycle" demineralizers with "Chemical saving technology" for producing demineralized water having conductivity < 1.0 μ S/cm. All components are carefully selected to give long term reliable performance. Advanced safety features have been incorporated for reliable operation 24 hrs. and 365 days a year. Over 30 different capacities from 2 m3/h to 60 m3/h to choose.

- Pre engineered
- Fully automated
- High quality Tier one components
- Reliable
- <35 minutes regeneration time
- Small foot print
- 2.0-60.0 m3/h
- Less chemical consumption
- · Less waste water generation
- Self neutralizing waste water

Pleases request for specific brochure for this system to know more about its performance, capabilities and benefits. Standardized pre engineered system and quick delivery.











REVERSE OSMOSIS SYSTEMS - CLOSED LOOP RO-MATRIX

WITH "MATRIX" ECG REAL TIME REMOTE ACCESS PERFORMANCE MONITORING

IONIC offers its unique skid mounted compact, pre-engineered "Matrix" series systems. Fully automatic PLC controlled Advanced Reverse Osmosis systems with "Easy Control" and "Real Time Monitoring" technology for producing purified water required in process, boiler feed, drinking etc. All components are carefully selected to give long term reliable performance. Advanced safety features have been incorporated for reliable operation 24 hrs. and 365 days a year.

The unique "Real Time" monitoring system developed by us for the first time in India is capable of providing normalized values for flow, salt rejection, salt passage, pressure drop continuously and has a very unique "ADP Indicator" (Allowable Decline in Performance) to tell the customer in plain English text what is the condition of the membranes since start up. Reference values are stored internally and automatically compared with the present normalized values to provide the customer on the spot decision making inputs for safe and long-term reliable operation of the system. In a way, this system protects the membranes from irreparable damage due to excessive fouling which if not detected at the right time may lead to costly downtime and membrane replacement.

The unique ADP indicator supports membrane cleaning decision making too! When to clean the membranes? Or Whether membrane cleaning is successful, partially successful or failure can be easily determined even by a layman.

All the above comes with affordable cost of ownership to our customers and backed by quality after sales service.

Our R.O plants are easier to configure and use than your cell phones! You have the option of having our Real Time Remote Monitoring system.

- Appropriate automated pretreatment to suit individual raw water characteristics
- Heavy duty nanosized corrosion resistant aluminum skid
- Side port membrane pressure tubes
- A range of high quality premium membranes
- Membranes selected based on raw water characteristics
- PLC based control with colour HMI
- Digital dosing system
- · Digital flow sensors
- Digital pressure sensors
- Digital conductivity sensors
- Premium quality Tier 1 components
- Process and equipment safety interlocks





CAPACITIVE ELECTRO DESALINATION

NON CHEMICAL ELECTRICAL DRIVEN PROCESS

lonic offers Capacitive Electro desalination(CED) Unique water treatment system to produce potable and process water from brackish water up 3000 ppm TDS. The technology is based on Capacitance principle and is simple and easy to use and consumes low power. Ideal for producing drinking water and process water that does not require complete removal of salts. Since it consumes low energy it can be coupled to solar / wind based power systems.



EASY DRAIN" SLUDGE DEWATERING SYSTEM

Fully Automatic

Fully automatic "EASY DRAIN" Sludge dewatering system is simple, compact and easy to sue all weather sludge dewatering system suitable handling biological and non-biological chemical sludge. The sludge dewatering is based on special water repellant coated hydrophobic poly propylene nonwoven disposable bags. Very easy to use compared to conventional dewatering process like sludge drying beds, filter press etc. 2 models are available to handle 20 and 40 m3/day of sludge.

For large systems we offer alternate technologies like belt press, screw press, centrifuge etc.

Features: -

- Fully automatic PLC controlled.
- SS 304 cabinet with transparent door.
- Sludge feed pump.
- Sludge conditioner dosing pump.
- Bentonite clay dosing pump.
- · Static mixer.
- Trolley for sludge bag removal and transportation.





PHARMACEUTICAL USP PURIFIED WATER SYSTEMS

"Sometimes lack of growth is essential". With IONIC the "BUG" stops in the raw water tank. Our systems carefully engineered and hence do not promote or support biological growth! IONIC offers its unique skid mounted compact, pre-engineered Fully automatic PLC controlled, ultramodern, 100% Sanitary Purified water generation system to meet USP, EP, JP, BP, IP with IIoT enabled "Real Time Monitoring" technology for producing purified water required for pharmaceutical applications. All components are carefully selected to give long term reliable performance. Advanced safety features have been incorporated for reliable operation 24 hrs a day, 7 days a week and 365 days a year. Ionic's involvement in the project starts from raw water source to the point of use. With our over 33 years of experience we are confident to meet current and future water quality requirements. The system uses a range of technologies like Turbiloc Active Multi Media Filter, Capacitive Electro Desalination, Ultra filtration, Ion exchange, UV, RO, CEDI etc. The most critical microbiological quality attribute is met easily with our properly designed and engineered systems. We do not put, unlike our competitors, any unreasonable conditions for meeting the final purified water quality commitments. System process design and engineering is done with modern licensed software's. Our solutions are unique and are backed by proper documentation for DQ, IQ, OQ, SOPs for operation, maintenance and sanitization. Detailed operation and maintenance manual is provided to the customer. Our systems are energy, chemical and water saving too! They consume less power, less chemicals and discharge lower quantity of water while USP producing purified water thus reducing our customers manufacturing cost. Advanced instrumentation and control with user friendly features makes the operation easier and reliable. When you talk to us you will find that purified water systems are not just having few vessels, piping, valves, membranes, tank etc.





ZLD-ZERO LIQUID DISCHARGE SYSTEM

Industries generally produce various types of wastewater and the wastewater characteristics and volume are industry and manufacturing process specific. Automotive and General Engineering industries produce difficult to treat waste waters like Waste Metal Working Fluids, Parts Cleaning, Electro Plating, Painting, Surface Pre-treatment, Electrodeposition coating, spray Painting, Die Casting etc. Some of the waste streams contain even toxic pollutants such as Heavy Metals, Cyanide, Phenols etc. which need to be removed to the lowest possible value to protect the environment. The present Pollution control regulatory norms expect the industries to strictly adhere to prescribed discharge norms and, in some cases, insist on zero liquid discharge system to ensure total compliance.

In achieving this, building a functional and effective wastewater treatment system will be essential – not only for meeting corporate sustainability goals but also for the preservation of the ecosystem as well as and in order to stay compliant with the governing laws and regulations. With that in mind, here are the principal considerations you need to take into account when choosing a wastewater treatment system and zero liquid discharge system.

Zero Liquid Discharge:

ZLD is both Capex and Opex intensive. There are several project drivers for implementing ZLD in your company such as

- a) Pollution control Regulatory requirement
- b) Corporate Sustainability and Cleaner production goals
- c) Customer requirement for Total compliance to prevent their supply chain disruption Treated water cannot be used for irrigation due to water quality problems
- d) Fresh Water scarcity
- e) Fresh water cost
- f) Fresh water treatment cost
- g) Existing Wastewater treatment is inadequate, inconsistent, complex and is expensive and the treated water is not suitable enough to be sent for ZLD system.
- h) Volumes is high and hence the Capex and Opex for the system is high
- i) No public sewer to discharge
- j) Inadequate irrigation (gardening) land to use the treated wastewater
- k) All of the above factors











WATER QUALITY ANALYSERS

Advanced sensors for monitoring water, waste water quality with IoT enabled Real Time Remote Access. IoT enabled Industry 4.0 and water 4.0 ready.

• Features:-

- Smart Digital Multi-Channel Multi parameters
- Configuration customized for each application for each application
- Flexible and field upgradable
- Expandable
- Process control outputs
- Special application specific software
- Digital 2 way communication interface
- Multi level Password protection
- Email alerts
- SMS text alerts
- SCADA/DCS connectivity
- Security
- Report generation
- · Automatic data logging and trending

• Parameters:-

- pH
- ORP
- Conductivity
- Chlorine
- Chlorine dioxide
- Organics
- Color
- Ozone
- Dissolved Oxygen
- Turbidity
- Suspended solids
- Particles
- Streaming potential for Coagulation control
- Charge
- Fluoride
- Peracetic acid
- o Flow
- Any analogue and digital signals













SOME OF OUR PROJECTS



































We're here to help you with all your water and wastewater treatment needs. Whether you're looking for customized solutions, technical support, or just want to explore how our services can benefit your business, feel free to reach out to us.

Our team of experts is ready to provide personalized assistance and ensure that you get the most effective and innovative solutions tailored to your requirements. You can contact us via phone, email, or through our website. We value every opportunity to collaborate and are committed to delivering excellence in every interaction.

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