I - DOSE - CT

Smart digital chemical dosing

Small in Size- Smart in Performance

Efficient I Reliable I Compact

"Smart Dosing, Absolute Control"

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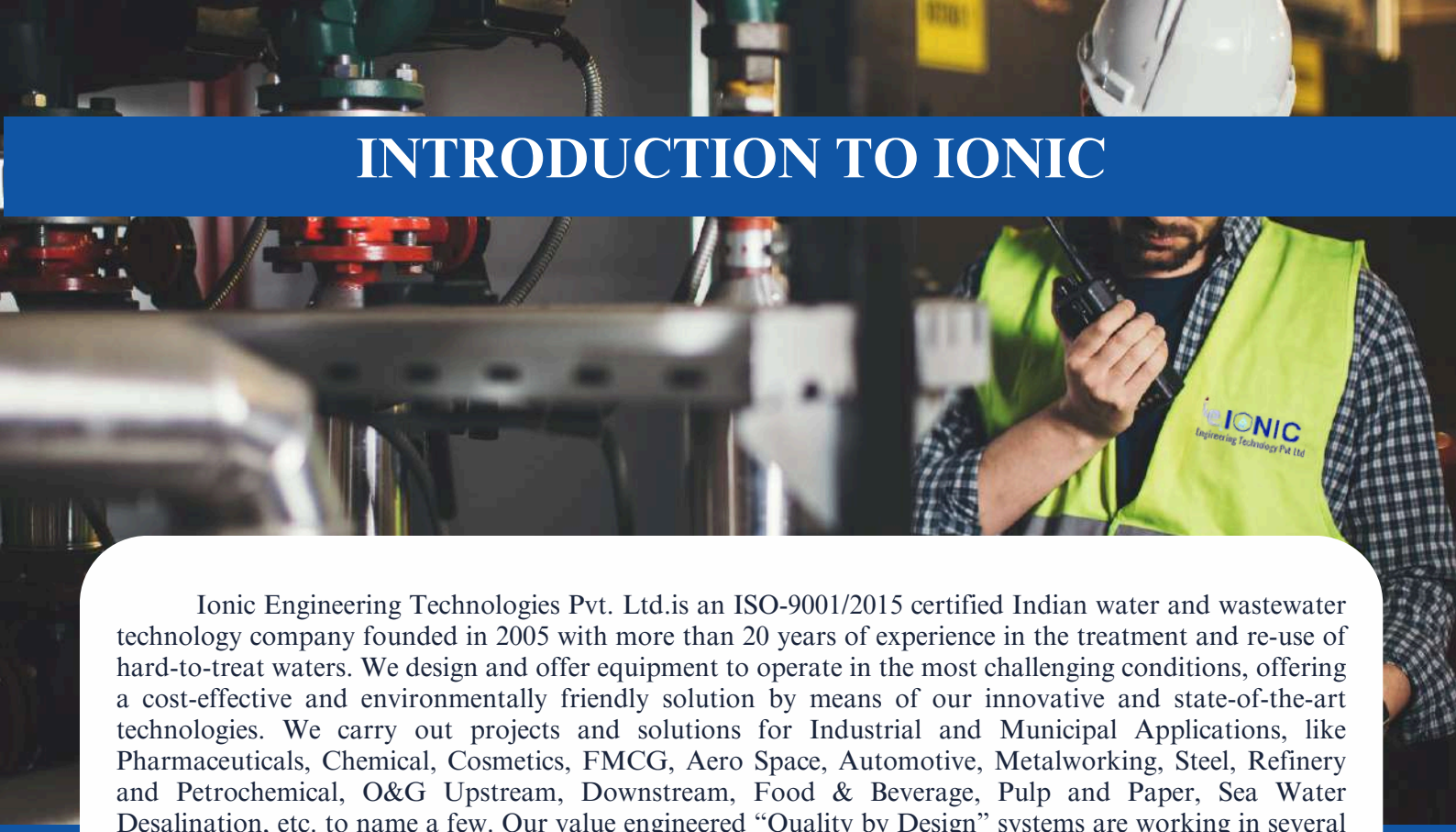
IONIC
Engineering Technology Pvt Ltd



INTRODUCTION TO IONIC

Ionic Engineering Technologies Pvt. Ltd.is an ISO-9001/2015 certified Indian water and wastewater technology company founded in 2005 with more than 20 years of experience in the treatment and re-use of hard-to-treat waters. We design and offer equipment to operate in the most challenging conditions, offering a cost-effective and environmentally friendly solution by means of our innovative and state-of-the-art technologies. We carry out projects and solutions for Industrial and Municipal Applications, like Pharmaceuticals, Chemical, Cosmetics, FMCG, Aero Space, Automotive, Metalworking, Steel, Refinery and Petrochemical, O&G Upstream, Downstream, Food & Beverage, Pulp and Paper, Sea Water Desalination, etc. to name a few. Our value engineered "Quality by Design" systems are working in several diverse industries for many years and is helping our customers move towards "Cleaner Production"

Motivation & Vision: Our main goal is to create value and make a difference for our clients and partners as well as deliver tailored-made solutions to satisfy the requirements of our clients, respecting the environment. At Ionic Engineering Technologies we believe that making water and wastewater reuse an affordable and sustainable water source is essential to the future development of mankind in terms of economy, environment, and society. All our systems are designed and engineered based on sound engineering practice and offer value for money and bring "Peace of Mind" to our customers.

Why Ionic? Good advice is half the battle won. Ionic Engineering is a technology neutral company and focused on providing "Quality by Design" engineered systems. We have technology associates based in Europe and USA for some of the cutting-edge disruptive technologies.The first step to the perfect water treatment solution: Understanding your wastewater analysis. We design the plant based on the water analysis sent by our customer.

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!

Find the best solution for your processes: Let our competent team from the application technology team advise you now! We look forward to hearing from you.

Customers: We have many reputed Multinational companies such as Unilever, Coca-Cola, Loreal, John Deere, Tata Hitachi, Bajaj, Tata Motors, Century rayon, GACL to name a few as our customers

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Small in Size- Smart in Performance

Take control of your Cooling Tower Water Chemistry in your hand with IoT enabled I-Dose

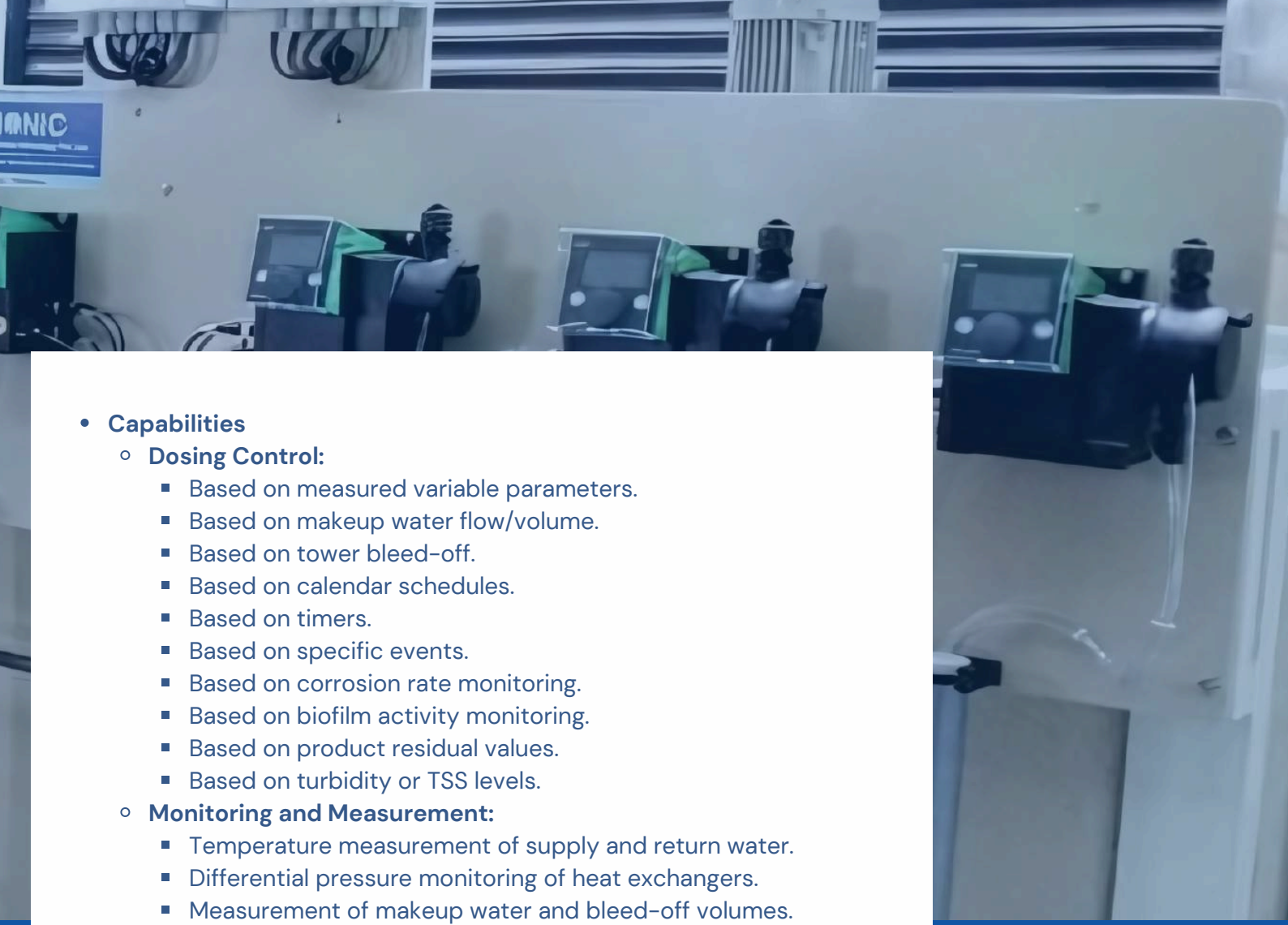
Scaling, Corrosion, Fouling are common problems in cooling towers affecting the cooling system performance. Various dissolved and undissolved water impurities present in water interferes with heat transfer.

Small in Size – Smart in Performance

Ionic is pleased to introduce I-Dose - CT - IoT enabled Smart Digital Chemical Dosing system to control water chemistry in your cooling water! Various specialty chemicals like scale, corrosion inhibitors, anti foulant , biocides are dosed in cooling water based on measured values like pH, Flow, ORP, Free Chlorine, TDS, Chlorine Dioxide , Turbidity etc. to prevent scaling , corrosion, fouling, Biofilm growth etc.

Success or failure of the treatment programmed to a great extent depends on proper chemical treatment implementation! Failure to control chemical addition accurately leads to under or over dosing which actually is counterproductive thus defeating the very purpose of chemical treatment programmed.

Universally LSI (Lange liar Saturation Index), RSI (Reynar Saturation Index), Corrosion and Biofilm rates are the indirect Key performance Indicators of a cooling system and direct performance indicators like differential pressure across the heat exchangers, differential temperature across the tower are monitored continuously and data logged.



- **Capabilities**
  - **Dosing Control:**
    - Based on measured variable parameters.
    - Based on makeup water flow/volume.
    - Based on tower bleed-off.
    - Based on calendar schedules.
    - Based on timers.
    - Based on specific events.
    - Based on corrosion rate monitoring.
    - Based on biofilm activity monitoring.
    - Based on product residual values.
    - Based on turbidity or TSS levels.
  - **Monitoring and Measurement:**
    - Temperature measurement of supply and return water.
    - Differential pressure monitoring of heat exchangers.
    - Measurement of makeup water and bleed-off volumes.
  - **Control Systems:**
    - Valve control.
    - Chemical tank level monitoring.
    - Chemical consumption monitoring.

- **Key Features**
  - **IoT-Enabled:** Real-time remote access with Water 4.0 + Industry 4.0 integration.
  - **24/7 Monitoring:** Reliable data logging, email/SMS alerts, and automatic reporting.
  - **Connectivity:** SCADA/DCS integration, Profibus/Modbus/TCP-IP communication.
  - **Customizable:** Configurable for site-specific needs.
  - **Smart Pumps:** Integrated control with multi-parameter monitoring.
  - **Durable Design:** Corrosion-resistant skid for pump and sensor protection.

- **Key Benefits**
  - Prevents under- or over-dosing of chemicals.
  - Intuitive dashboard for easy monitoring.
  - Reduces chemical wastage and costs.
  - Ensures consistent, reliable performance.

Digital Water Quality Sensors
Reliable digital sensors are available for site-specific and customer-specific needs to measure:

- Corrosion rates
- Biofilm activity
- Organics, TSS, Turbidity
- pH, ORP
- Free Chlorine, Chlorine Dioxide, Ozone
- Photometer readings

Digital Flow and Volume Sensors
Various flow sensor types, including turbine, paddle wheel, electromagnetic, magnetic, vortex, and ultrasonic, are available for measuring makeup and bleed-off flow and volume.

Dosing Control

- Measured Variables: Chemicals like pH adjusters and oxidants are dosed based on pH, ORP, flow, or volume.
- Time/Event Based: Biocides and other chemicals are dosed based on intervals or specific events.

Customization
Systems are fully customizable to ensure the lowest possible CAPEX while delivering full functionality. Share your specific requirements to design the best solution for your application.

Information Required for Proposal

1. **Chemical Treatment Program Details:** Cooling water treatment protocol.
2. **Dosing Pumps:** Number and required capacity (flow rate).
3. **Flow Rates and Line Sizes:** Makeup and tower bleed-off flow rates with line dimensions.
4. **Monitoring Parameters:** List of required parameters, e.g., pH, ORP, Free Chlorine, ClO_2, TDS, Conductivity, TSS, Turbidity, Ozone.
5. **Advanced Monitoring:** Corrosion rate, biofilm activity, product residuals.
6. **Remote Monitoring:** LAN or GPRS connectivity for real-time data access.
7. **Alerts:** Email and text notifications.
8. **Tank and Chemical Monitoring:** Chemical consumption and dosing tank levels.
9. **Other Requirements:** Additional monitoring or performance parameters for the cooling tower system.

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IONIC ENGINEERING TECHNOLOGY PVT. LTD.

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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