

Supmea



Textile Dyeing and Finishing Industry Solutions

Committed to Process Automation Solutions

Supmea & Textile Dyeing and Finishing Industry



Precise pH control provides a stable guarantee for product quality, while real-time monitoring of auxiliaries, water, and steam flow significantly reduces operating costs and minimizes the environmental impact of production.

Supmea has accumulated extensive application experience in the textile dyeing and finishing industry. Leveraging its strengths in process automation and digital platforms, Supmea provides solutions for energy conservation, consumption reduction, and production optimization, helping enterprises achieve their dual carbon goals.



Enhance production efficiency

The application of automated control systems and instrumentation makes the dyeing and finishing process more precise and efficient, reduces the error rate of manual operations, and enhances overall production efficiency.



Optimize product quality

Through real-time monitoring with quality control and inspection instruments, quality issues in the production process can be promptly identified and resolved, improving product consistency and yield rate.



Reduce energy consumption costs

The application of energy management instruments enables enterprises to monitor and analyze energy consumption in real time, identify energy bottlenecks, implement energy-saving measures, and reduce production costs.



Reduce waste and product loss

By utilizing precise instrumentation for detection and control, the generation of defective products during the production process is minimized, reducing waste losses and enhancing the enterprise's economic efficiency.

Industry Solutions

Dye pH Monitoring

Measured Medium: Dye Dispersant

Recommended Configuration:
PH6.5 Transmitter + PH5015 pH Electrode

Selection Recommendations:

- ① Solution temperature up to 90° C, pH > 10;
- ② pH electrode must withstand high-temperature and strong alkaline environments;
- ③ pH electrode is a consumable, regular replacement is recommended.



Chemical Tank Level Detection

Measured Medium:

Textile auxiliaries / Dyes / Washing agents

Recommended Configuration: SUP-P300 Pressure Transmitter

Selection Recommendations:

- ① Range 10kPa or 20kPa, output signal 4~20mA;
- ② Internal encapsulation to resist high humidity environments;
- ③ If in direct contact with liquid and the medium is alkaline, use 316L material for the threaded connection.



Airflow Dyeing Machine Flow Monitoring (Water, Steam)

Measured Medium: Water, Steam

Recommended Configuration: LDG-SUP-A100 Electromagnetic Flow Meter; LUGB-SUP Vortex Flow Meter

Selection Recommendations:

- ① For low-temperature dyeing tank inlet water, use an integrated electromagnetic flow meter;
- ② For high-temperature outlet water, use a split-type flow meter;
- ③ For steam supply to textile dyeing equipment, use a vortex flow meter;
- ④ In high-temperature and high-humidity environments, ensure proper protection and grounding of instruments.



Application Cases

Jiangsu Province A Textile Dyeing Equipment Company

Customer Requirement: The dyeing machine produced by the customer requires the installation of an electromagnetic flow meter to monitor water consumption in real time. Based on flow data, the system, in conjunction with a computer pulse acquisition system, will achieve quantitative control of valve opening and closing.

Solution: Supmea's electromagnetic flow meter offers advantages such as accurate measurement, fast response, and reliable performance, meeting the customer's precise requirements for water flow monitoring.

Selected Product: LDG-SUP-A100 Split-type Electromagnetic Flow Meter (PTFE lining, 316L electrodes)



Jiangsu Province A Dyeing Machine Machinery Equipment Company

Customer Requirement: Due to the corrosive nature of the measured medium, the diaphragm of the pressure sensor used for level measurement at the bottom of the material tank often gets damaged, causing significant zero drift and resulting in poor overall performance. The customer hopes to resolve this issue.

Solution: The solution involves using a steam drum pressure differential method for level measurement, which effectively addresses the corrosion problem. Supmea pressure transmitters offer high accuracy and repeatability, ensuring more stable and reliable equipment operation.

Selected Product: SUP-P300 Pressure Transmitter



Suzhou City A Textile Finishing and Dyeing Company

Customer Requirement: The customer seeks to address issues such as unstable dyeing quality caused by manual chemical dosing, large batch-to-batch variations, and to promote the standardization and reproducibility of the production process, ensuring the company's high-quality development.

Solution: By measuring the pH value inside the dyeing tank, precise dosing and adjustment are achieved, improving dyeing yield and achieving cost reduction and efficiency improvement.

Selected Product: PH6.5 Transmitter + PH5015 pH Electrode



Product Recommendation



01 Integrated Electromagnetic Flow Meter LDG-SUP-A100

Used for measuring the dyeing tank inlet water flow

- Accurate measurement with 100% device calibration;
- Safe operation with independent wiring chamber;
- Intelligent diagnostics, equipped with air pipe detection technology.



02 Temperature and Pressure Integrated Vortex Flow Meter LUGB-SUP

Applicable for steam flow measurement in textile dyeing equipment

- Measured medium: Single-phase liquids, gases, or steam (saturated or superheated steam);
- Operating temperature range: (-40~350) °C.



03 Glass Electrode with Strong Acid and Alkali Resistance SUP-PH5015

Suitable for continuous monitoring of pH values in dye baths and textile printing and dyeing wastewater

- Measurement range: (0~14) pH;
- Temperature range: (0~130) °C;
- Pressure resistance: 0.25 MPa.



04 Diffused Silicon Pressure Transmitter SUP-P300G

Used for measuring the liquid level of dyeing paste in chemical tanks

- Measurement range: 0-10 kPa, 0-20kPa;
- Features 316L stainless steel diaphragm and oil-filled isolation structure;
- Strong anti-interference, long-term stability.



05 Responsive Armored Resistance Thermometer SUP-WZPK

Designed to meet the water temperature measurement requirements of washing machines

- Integrated wiring box structure, highly waterproof, and resistant to condensation, protecting internal circuits;
- Stainless steel armor, resistant to temperature, vibration, and strong interference, with fast thermal response.



06 Flow Totalizer SUP-2600

- Display for flow meter size 160 x 80 mm;
- Flow rate, totalizer, pressure, temperature, Input pulse, 4-20 mA;
- Output 4-20mA, Relay x2, RS485;
- Power supply 220 VAC.



Supmea Automation Co.,Ltd.

Web: www.supmea.com

Phone: +8615868103947

Email: info@supmea.com

Address: 5th Floor, Building 4, Singapore Science and Technology Park, Hangzhou