Mobile Communication Based Programmable pH Measurement System

1. **Developing Staff Members** : Mobile Communication Based Programmable pH Measurement System

2. **Developing Staff Members**

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3. Development Idea

The pH value has become an important index in various fields. The invention aims to develop a multi-function system, which can support stand-alone and on line measurement, single and continuous measurement, and fixed point measurement and mobile measurement. In addition, several problems regarding relevant instruments today such as monitoring setting, early warning, non-invisibility, inability to store data and to monitor remotely, inability to stand are also solved. The measurement values can be read through the output display on the control box, the mobile phone and the system server. By integrating the measured location, the electronic map and the measurement value through the mobile APP, the measurement will be much easier to read and distinguish. Experimental results indicated the feasibility, validity and reliability of the proposed system.

4. Technological Competition and Industrial Application

(1) Agriculture/Mining - Soil Monitoring.
(2) Aquaculture - Water Quality Monitoring.
(3) Industrial Wastewater - Wastewater Discharge Monitoring.
(4) Environmental Protection - Environmental Pollution Monitoring.
(5) Food Processing Industry - Food Monitoring.
(6) Medical industry - sample data monitoring.
(7) People's livelihood water - water quality monitoring.
(8) Petrochemical Industry - Chemical Substance Monitoring.
(9) Livestock and Poultry - Waste Monitoring.

5. Merchandise Statement of Achievement

(1) Electronic measurement data, cloud-based data storage management.
(2) Can be used for stand-alone measurement and network

measurement.

(3) Single measurement and continuous measurement.

(4) Hardware（monitor）/software（mobile phone）dual-mode monitoring settings.

(5) Supports fixed-point（static）/moving（dynamic）measurement.

(6) With near-end measurement warning and remote SMS warning notification.

(7) Combined display of measurement data, position（satellite positioning）and electronic map.

(8) Operation of mobile phone monitoring system.

(9) Using different colors to distinguish different levels of data on electronic maps.

(10) Serrated Sleeve for Sensor Protection and Fixed（Standing）Function.

(11) Interactive operation interface, easy to learn and use.

(12) Realize measurement automation and unmanned goals.

Fig 1.

Fig 2.

Fig 3.

Fig 4.