川源（中国）机械有限公司
GSD（China）Co.,Ltd.

INTELLIGENT WATER MANAGEMENT SYSTEM

智慧水务管理系统

www.gsd.net.cn

水务管理
物联网解决方案

IoT SOLUTIONS FOR
WATER MANAGEMENT

远程监控
Remote monitoring

降低巡检人员成本

- 实时监控设备＆水质状态
- 短信及网页远程控制设备启停，提高现场应变能力
- 分散各地的一体化及多种设备，皆可使用本系统做集中管理

Trim down the cost of human resource as well the time span

- Collection the data and feedback from on site operating apparatus without on site attendance.
- At any time and at any condition of weathers, duty of monitoring and control are effectively being carried out at instant responsive communication.
- Collective and Centralization of data from various site equipments become feasible, easy and relatively less skilled technician required.
- Unmanned attending means reducing the cost of total effectiveness.

异常预警
Early alarm

减少设备维护成本

- 设备或水质状态异常时，立即电话及短信通知负责人员
- 设备故障前预先报警，减少损失
- 专业技服团队可提供维护咨询服务

Trim down the Cost of Downtime as well maintenance and repair

- Provide early sign of failure by alerting via mobile phone or others wireless network system.
- Early precaution step and action could be instantly being activated.
- Should there is any contingency danger or untoward incident, it could be immediately to response in advance before it comes costly damage and irrevocable dangerous - Early alert facilitate service team to well prepare and act promptly and not wasting unnecessary time and labor.

自动控制
Automatic control

简化设定时间＆人力

- 简单易懂的操作界面，无需专人编程，自行设定参数即可使用
- 多台设备联动控制、运行周期控制，时段排程，各种逻辑组合控制，只需简单设置便可灵活运用

Simple and easy to operate, required no skilled personnel

- Built with informative interface and step which require direct to browse.
- Multiple layer of interface provide in depth data and information to enhance and explode upgrading as well improving the operating system.
- Built in customer oriented interface for easy to read and alter. All parameter and functions set up requires no specialist.

系统架构
SYSTEM
STRUCTURE

决策层
Decision-making layer

云平台
Cloud platform

数据分析 | 成本优化 | 节能
Data Analysis | Operation Optimization | Energy Saving

监控层
Monitoring layer

现场监控平台
On-site monitoring platform

趋势图分析 | 远程监控 | 异常警报
Trend Graph Analysis | Remote Monitoring | Abnormality Alarm

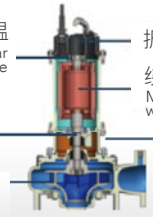
传输层
Transmission layer

EP6 智能控制器
EP6 intelligent controller

研华ADAM3600 物联网终端
ADAM3600 IoT Terminal of Advantech

感知层
Perception layer

设备数据
Equipment data



后轴承测温
Measurement of rear bearing temperature

前轴承测温
Measurement of front bearing temperature

油室漏水保护
Water leakage protection against oil chamber

振动 Vibration

绕组测温
Measurement of winding temperature

电机漏水保护
Water leakage protection against motor

水质数据
Water quality data

DO 溶氧计
(DO Sensor)

NH3 氨氮计
(NH3 Sensor)

水位泥位计
(Water level/ Sludge Sensor)

设备层
Equipment layer

水泵
Pump

曝气机
Aerator

风机
Blower

一体化泵站
Integrated pump-station

一体化污水处理设备
Integrated sewage treatment equipment

河道治理
Treatment of river courses

灵活的多场景服务方案

FLEXIBLE MULTI-SCENARIO
SERVICE SOLUTION

单机设备管理

- **实时掌握设备状态**

  振动/ 电表/ 轴承温度/ 绕组温度/ 漏水感知

- **设备故障前，报警通知维护**

  数据异常→即时报警或停机→人员快速维修

- **专业技术服务团队，提供设定/ 维护/技改/优化建议**

Management of stand-alone equipment

- Master equipment status in realtime
  Vibration / electric meter/ bearing temperature /winding temperature /water leakage perception.
- Give an alarm to notify maintenance before equipment failure.
  Abnormal data →Immediate alarm or shut down →Rapid maintenance of equipment by specialized personnel.
- There is a professional technical service team to offer suggestions for setting, maintenance, technical improvement and optimization.

城镇A
Town Area A

城镇B
Town Area B

城镇C
Town Area C

多设备集中管理

- **快速组建**

  简单3 步骤，管理多台智能设备：
  ①安装电脑端管理系统的标准化软件包
  ②简单设定参数
  ③所有设备的数据及点位名称自动显示在网页

- **无需专人编写软件，省时省力**

- **可与PLC 系统对接，改造现有自控制系统，增加异常报警，远程监控功能**

Centralized management of multiple equipment

- Quick construction
  Only simple 3 steps are needed to achieve management of multiple smart devices:
  ①Install the standard software package of the computer management system.
  ②Take simple steps to setparameters.
  ③Data and site names of all the equipment are automatically displayed on the webpage.
- There is no need of writing software by a specially-assigned person, saving both time and labor.
- It can be easily docked to the PLC system, the existing automatic control system is transformed, and the function - abnormality alarm and remote monitoring are increased.

一体化设备管理

- 无人值守

  实现一体化泵站及污水处理设备远程监控、异常报警，达到无人值守、减少巡检人员

- 内建4G模块

  方便管理偏远地区的设备

- 新增站点便捷

  管理者可自行登录网页新增站点，不用专人修改编程，不用校对点位

Management of integrated equipment

- Unattended operation

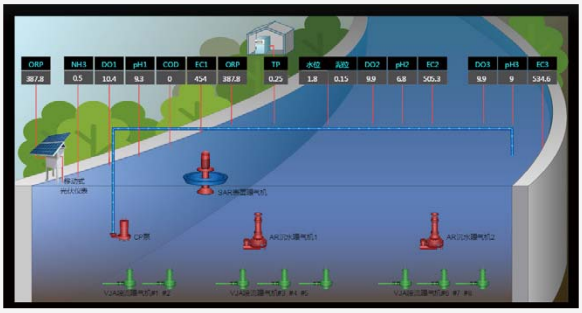
  Remote monitoring and abnormality alarm of integrated pump stations and sewage treatment equipment are realized, and unattended operation and reduction of inspection personnel are achieved.

- Built-in 4G module

  It is convenient for managing equipment in remote areas.

- New sites can be added conveniently

  Managers can log in the web pages to add new sites, and there is no need to modify programming by a specially-assigned person or proof read sites.



河道水质监控管理

- 水质连续监测，数据记录存储，异常主动报警，自动控制设备等功能
- 透过趋势图分析水质变化状况
- 依据水质状态，联动设备改善水质
- 专业环工与技术服务团队，提供设备选型/ 设定/ 安装建议

Monitoring and management of the quality of river water

- There are functions such as continuous monitoring of water quality, data recording and storage, active abnormality alarm and automatic equipment control.
- Water quality changes are analyzed based on trend graphs.
- Equipments are linked, so as to improve water quality, according to water status.
- There is a professional environmental engineering and technical service team to offer suggestions for equipment selection, parameter setting and equipment installation.

方案选择
SELECTION OF SOLUTIONS

◆选择方案 Select solutions

设备管理 Equipment Management	功能 Functions
智能设备管理（如水泵／风机／曝气机） Intelligent equipment (such as water pump, blower and aerator) (若需设备异常主动报警功能建议采购以下方案) (If you need the function–active alarm for equipment abnormality, the following solution is advised.)	使用前：没有设备运行数据 使用后：设备数据为RS-485，方便与客户的PLC或网关对接，采集数据 Before use: no equipment operation data. After use: equipment data is RS-485, which is convenient for docking with customer PLC or gateway and collecting data.
单机设备管理（在有线网络环境） Management of stand-alone equipment (operated in wired network environment)	使用前：无法远程监控管理设备 使用后：使用手机或电脑，透过EP6网页及短信，达到异常报警／远程监控管理设备 Before use: unable to monitor and manage equipment remotely. After use: abnormality alarm / remote equipment monitoring and management are realized with a mobile phone or computer through EP6 web pages and SMS.
单机设备管理（在 4G 传输环境） Management of stand-alone equipment (operated in 4G transmission environment)	使用前：无法远程监控管理设备 使用后：使用手机或电脑，开启水务设备管理系统网页，达到异常报警／远程监控管理设备 Before use: unable to remotely monitor and manage equipment. After use: abnormality alarm/remote equipment monitoring and management are realized with a mobile phone or computer by opening the webpage of the water equipment management system.
多台设备集中管理 Centralized management of multiple equipment	使用前：组建耗时长，需专人客制化编写软件或APP、校对传感器点位名称数据，新增点位需专人处理 使用后：组建快速使用容易，标准化硬件加标准化软件为本系统的优势，新增点位简单，点位名称数据自动校对，具备分级管理、远程监控、异常报警、查询签核、趋势图分析、数据存储下载等功能 Before use: it takes a long time to construct, and a specialized person is required to write software or APP in a customized way, proofread sensor site name and data, and new sites are required to be processed by a specialized person. After use: it is quick to construct and easy to use. This system is featured by standard hardware and standard software. It is easy to add sites and site names and data can be proofread automatically. It has the functions such as hierarchical management, remote monitoring, abnormity alarm, inquiry and sign off, trend chart analysis, and data storage and download.

	传感器 Sensor	EP6 智能控制器 EP6 intelligent controller	水务设备管理系统 (软件 + 本地服务器) Water equipment management system (software and local server)	云平台 Cloud platform
				
	●			
	●	●		
	●	●	●	选购 Purchasing
	●	●	●	选购 Purchasing

选择监测需求 Select monitoring demand

设备监测 Equipment monitoring			
○ 入口压力	Inlet pressure	○ 前轴承温度	Front bearing temperature
○ 出口压力	Outlet pressure	○ 后轴承温度	Rear bearing temperature
○ 流量	Flow	○ 前轴承振动	Front bearing vibration
○ 智能电表	Smart electric meter	○ 后轴承振动	Rear bearing vibration
三相电压	Three-phase voltage	○ 油室内漏水保护	Water leakage protection inside the oil chamber
三相电流	Three-phase current	○ 接线盒内漏水保护	Water leakage protection inside the junction box
输入功率	Input power	○ 电机内漏水保护	Water leakage protection inside the motor
○ 绕组温度	Winding temperature	○ 其他（请填写）：	Others (please complete):

水质监测 Water quality monitoring	
○ WLS-智能水尺传感器（水位泥位计）	Water level/ Sludge Sensor
○ SS-悬浮固体浓度传感器	Suspended Solids Sensor
○ DO-溶解氧传感器（电极法）	Dissolved oxygen Sensor
○ TB-浊度传感器	Turbidimeter Sensor
○ EC -电导度传感器	EC Monitor
○ PL-投入式液位计	Level Sensor
○ NH3-氨氮传感器	Ammonia Sensor
○ SC -盐度传感器	Salinity sensor
○ NO3-硝酸盐氮传感器	Nitra Sensor
○ TDS-总溶解性固体传感器	Total dissolved solids
○ ORP-氧化还原电位传感器	ORP Monitor
○ UVDO-溶解氧传感器（光学法）	Optical Dissolved oxygen Sensor
○ pH-酸碱度传感器	PH Monitor
○ F-氟离子传感器	Fluoride Sensor
○ 其他（请填写）：	Others (please complete):

选择服务 Select services

○ 管理系统1年质保期服务
1-year warranty period service for the management system.

○ 管理系统维护年约：系统维护、更新、远程线上服务
Annual maintenance for the management system: system maintenance, updating and remote online service.

○ 管理系统网页租用：提供客户帐号密码，客户登入网页管理设备
Webpage rent of the management system: provide customers with account, password and customers can log on the webpage to manage equipment.

○ 设备委托管理服务年约：监控设备运行状况、异常报警通知、维护保养通知，维修费用另行报价
Annual equipment entrusted management services: monitor equipment operating conditions, abnormality alarm notice and equipment maintenance notice. Repair costs will be offered separately.

成功案例
SUCCESSFUL
CASES

多台智能水泵管理
惠州某水质净化厂

Management of several intelligent water pumps
The water purification plant in Huizhou

MBR 污水净化管理系统
嘉兴某化工厂

System for the management of MBR sewage purification
The chemical plant in Jiaxing

一体化污水处理设备管理
山东某客户

可集中管理多台一体化设备。

Management of integrated equipment for sewage treatment
A customer from Shandong
Centralized management of several integrated equipment is possible.

雨水污水净化回用管理系统

(海绵工厂)：浙江某工厂

云平台管理系统

工艺流程图实时监控设备与水质状态。

缓解防汛压力、回收雨水污水再利用、确保污水零排放，减少自来水用量。

System for the management of rainwater and sewage purification and recycling

(sponge processing plant)the plant in Zhejiang Province

Management system based on cloud platform.

There is a process flow diagram to monitor the status of equipment and water quality in real time.

Flood control pressure is relieved, rainwater and sewage are recycled, zero discharge of sewage is ensured, and consumption of tap water is reduced.

浙江平湖市河道水质监测管理

中控室SCADA管理系统

24小时监测河道水质

以溶解氧传感器参数，自动控制曝气机启停，降低能耗。

持续追踪水质变化情况，确保水质达标。

Monitoring and management of water quality in the river courses of Pinghu City, Zhejiang

System for the management of SCADA(Supervisory Control and Data Acquisition) in the central control room.

Water quality of the river courses is monitored 24 hours a day.

Start and stop of the aerator is automatically controlled with the parameters of dissolved oxygen sensor, so as to reduce energy consumption.

Change of water quality conditions is followed up continuously to ensure that water quality meets the standard.

GSD力助您成为物联环境科技的领先者

GSD HELP YOU BECOME THE FRONT SUNNER IN IoT ENVIRONMENTAL TECHNOLOGY

凝聚超过20 年的水务设备与工艺经验，GSD川源推出操作容易、布建快速的智慧水务管理系统，提供符合水务运营需求的解决方案，为客户降低运维成本、提升水处理效率，为环保行业带来技术创新、为改善地球生态做出更大贡献。

With more than 20 years' experience in water equipment and process, GSD has launched the intelligent water management system featured by easy operation and rapid deployment to provide solutions that meet the needs of water operations. It will reduce the cost of operation and maintenance and improve the efficiency of water treatment for customers, bring technological innovation to the environmental protection industry, and make greater contributions to improving ecological environment.

川源与其众多合作伙伴共同打造智慧水务管理系统

GSD and its partners jointly developed the intelligent water management system.

ADVANTECH Enabling an Intelligent Planet | SSI | SEAH Engineering | newterra MicroClear® membranes. Modular simplicity.

欢迎索取以下产品型录

泵系列	潜水泵系列 | 陆上泵系列 | 特种泵系列
搅拌推流系列	搅拌机系列 | 推流器系列
供氧曝气系列	曝气机系列 | 曝气盘系列 | 曝气管系列
风机系列	三叶罗茨鼓风机系列 | 增压罗茨鼓风机 | 沉水式风机 | 空气悬浮离心鼓风机
污泥处理设备	带式脱水机 | 厢式压滤机 | 非金属矩形刮泥机 | 浅层高效气浮设备
智能化系列	EP6 物联监控管理系统 | 空气质量管理系统 | RS-485 传感器
反应器及套装设备	芬顿反应系统 | MBR生物膜反应器 | 预制泵站 | 一体化污水处理设备
耗材药剂及相关设备	生物绳 | PAC 聚合氯化铝 | PAM 聚丙烯酰胺 | 泡药设备

GSD 的经营理念

G-Green 绿色　S-Safe 安全　D-Development 永续经营

川源

环保设备和技术服务的专业伙伴

免费咨询电话

400-657-9066

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