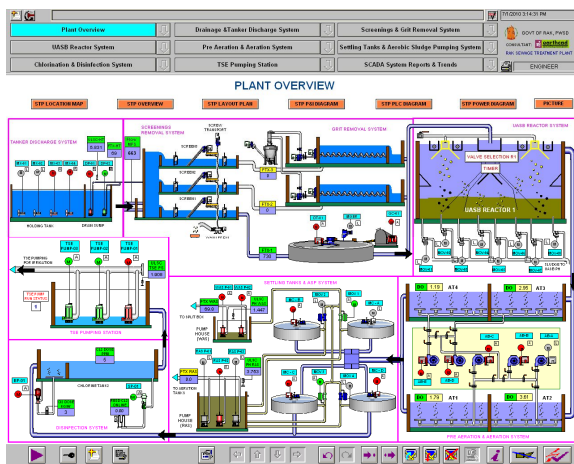


Environmental Automation

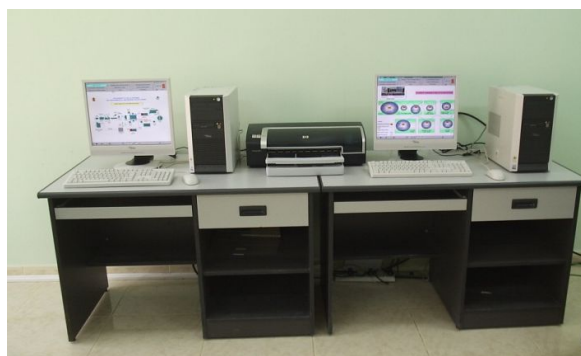
“Environmental Automation and SCADA System for Industrial and Municipal Wastewater and Water Applications”



SCADA System of RAK STP



Fabrication and Testing of Automation Control Panel



Control Room of SCADA System at RAK STP

- Large Scale Sewage Treatment Plants 1

- Packaged Water & Wastewater Treatment Plants 2

- Wastewater & Treated Sewage Effluent Pumping Stations 3

- RO Water Treatment Systems 4

- Odour Control Systems 5

FOR COMPLETE INFORMATION CONTACT:

Sameer Khan
Director Business Development

skhan@iwater-tech.com
skhan168@eim.com
www.iwater-tech.com
Cell: +971-52-8078080

Earthcad Environment FZ-LLC
Office 3/3 RAK Business Square, 12th Floor
Amenity Center, Tower 1, PO Box 86301
RAK Investment Authority Free Zone, RAK, UAE

ABOUT AUTOMATION

What is SCADA System

The Supervisory Control And Data Acquisition (SCADA) System also known as the Human Machine Interface (HMI) is state of the art PC based system operating on Windows based platform.

The HMI system communicates with the PLC's via special communication interface built into the PLC. A compatible interface is required to be made available inside the PC or HMI device to enable communication. The protocol for such a communication interface at times proves to be a bottleneck in further expandability of the system. Hence, it is preferable to have an open interface, which can be used independent of manufacturer. Profibus-DP is one such protocol, which can be used for HMI communication.

ADVANTAGES OF SCADA SYSTEM

The advantages of SCADA System include:

SCADA System is provided to cater to three categories of requirements, which cover all aspects of the system. The first category represents the major operational functions:

- Alarm Reporting
- Operational Monitoring
- Operational Control

The second category is concerned with the common systems necessary for the support of the functions included in the first category:

- Data Collection and Storage
- Presentation of Information
- Interfaces to external systems

The third category includes all the auxiliary functions, which must be considered in the systems definition:

- Operational Security and System Access
- Configuration
- Administration
- Back-up Operation

SCADA System offers full functionality for process control whereas HMI is a wider term generally used for all kinds of SCADA interfaces. The HMI system is generally software, which runs on PC or any other type of display panel and performs following functions.

- Visualization of plant operation and operating parameters.
- Functional Operation and Control of plant equipment.
- Plant and equipment related event messaging and Alarm functions.
- Process value trend recording and archiving function.

Generation of reports for different levels of parameters

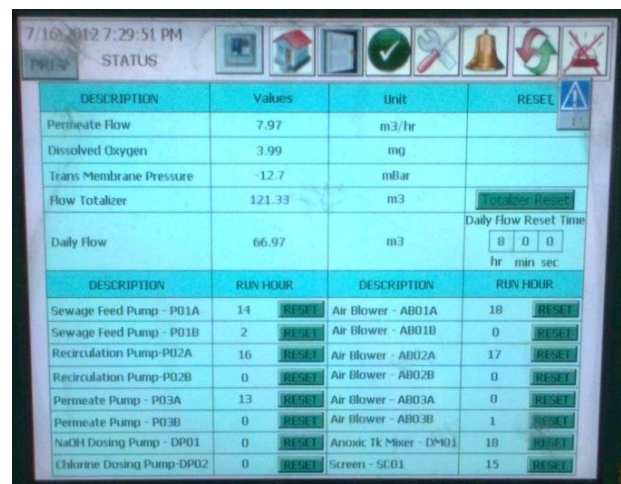
Generation and preparation of Trends of parameters

The HMI system helps the operator to keep watch on the complete plant while allowing him to keep track of all the parameters as well as control of the plant.

SCADA System use in a plant facilitates efficiency in O&M and optimizes human resources requirements.

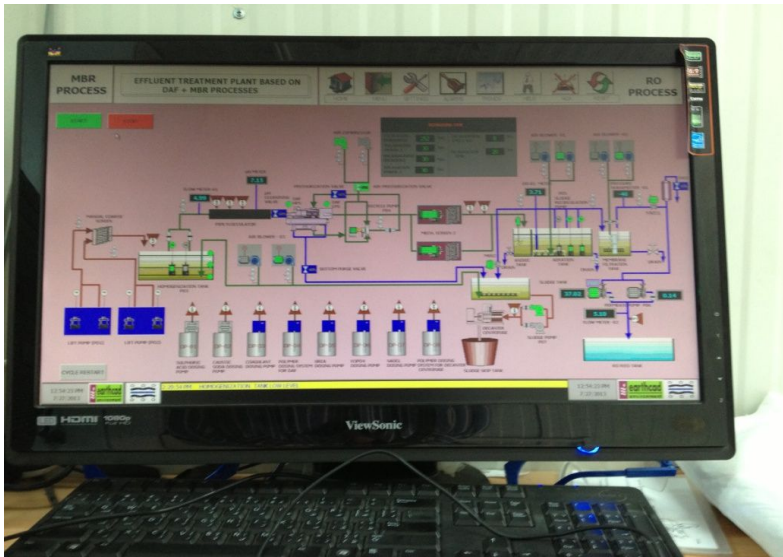


Desktop Based SCADA System at IWATER MBR STP

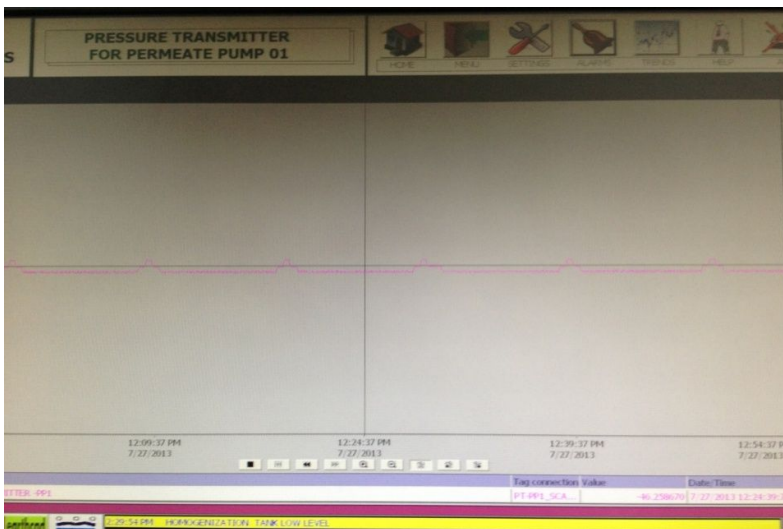


DESCRIPTION	Values	Unit	RESET
Permeate Flow	7.97	m ³ /hr	
Dissolved Oxygen	3.99	mg	
Trans Membrane Pressure	-12.7	mBar	
Flow Totalizer	121.33	m ³	Reset
Daily Flow	66.97	m ³	Daily Flow Reset Time hr min sec 0 0 0
DESCRIPTION	RUN HOUR	DESCRIPTION	RUN HOUR
Sewage Feed Pump - P01A	14	Air Blower - ABO1A	10
Sewage Feed Pump - P01B	2	Air Blower - ABO1B	0
Recirculation Pump-P02A	16	Air Blower - ABO2A	17
Recirculation Pump-P02B	0	Air Blower - ABO2B	0
Permeate Pump - P03A	13	Air Blower - ABO3A	0
Permeate Pump - P03B	0	Air Blower - ABO3B	1
NaOH Dosing Pump - DP01	0	Anoxic Tk Mixer - DM01	10
Chlorine Dosing Pump-DP02	0	Screen - SC01	15

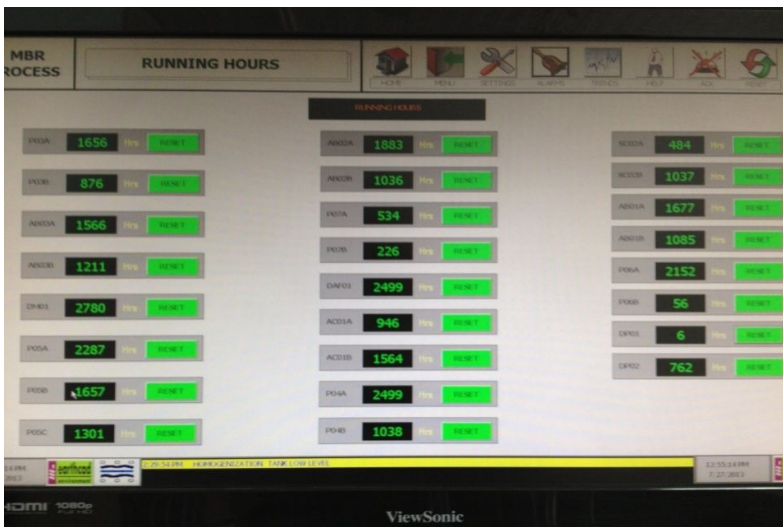
HMI Based SCADA System at IWATER MBR STP



**DESKTOP BASED SCADA
IN AL JUICE MBR ETP**



**ETP PLANT MONITORING
DATA WITH GRAPHS**



The image shows a SCADA interface window titled "RUNNING HOURS". The window displays a table of running hours for various electrical equipment. The table is organized into three columns, each with a header "RUNNING HOURS". The equipment names and their corresponding running hours are listed in the table.

Equipment	Running Hours	Status
PROA	1656	OK
PROB	876	OK
PROA	1566	OK
PROB	1211	OK
PROA	2780	OK
PROA	2287	OK
PROB	1657	OK
PROA	1301	OK
PROA	1883	OK
PROB	1036	OK
PROA	534	OK
PROB	226	OK
PROA	2499	OK
PROB	946	OK
PROA	1564	OK
PROA	2499	OK
PROB	1038	OK
PROA	484	OK
PROB	1037	OK
PROA	1677	OK
PROB	1085	OK
PROA	2152	OK
PROB	56	OK
PROA	6	OK
PROB	762	OK

**RUNNING HOURS OF ALL STP
ELECTRICAL EQUIPMENTS**