

PLC/HMI Control System for Ma'ameer Sewage Treatment Plant, Bahrain

Utilities

Wastewater Treatment

STP Plant Control



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Founding year:

1999

Solution
Partner

SIEMENS

Automation

Solution Partner: Prudent Solutions WLL
Customer: Zohal Contruction / MOW
Segment: Waste Water Treatment

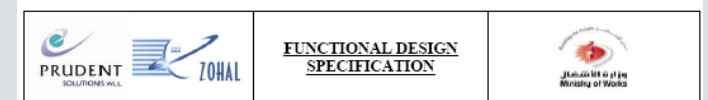
Requirements of the customer:

- Inaugurated in December-2012, the Ma'meer STP Plant was built on BOOT basis by M/s Zohal Construction with a minimum capacity of 2500m³/day, serving 500 industrial and service locations in Blocks 633 & 634 of Bahrain. The plant adopts Membrane Bio- Reactor (MBR) filtration technique to treat sewage water. M/s Watson Khonji Bahrain was the Technical Consultant for this project.
- For the integrated monitoring and control of this plant including sequencing, interlocking, data acquisition, reporting & alarming - a PLC based Control System was required.



Short description of the solution

S7-300 based Control System with Remote IO's at different plant location, local HMI's & WinCC SCADA Stations for monitoring the overall Plant operations.



FUNCTIONAL DESIGN
SPECIFICATION

Functional Design Specification
PLC Based Control Panel
For
Ma' Amir Sewage Treatment Plant
Project Ref No: C 45110B

End User: Ministry of Works

Consultant: M/s Watson Khonji Consulting Engineers

Client: M/s Zohal Construction Company W.L.L

Submitted By -
Prudent Solutions W.L.L

SIEMENS

Authorized Solution Partner

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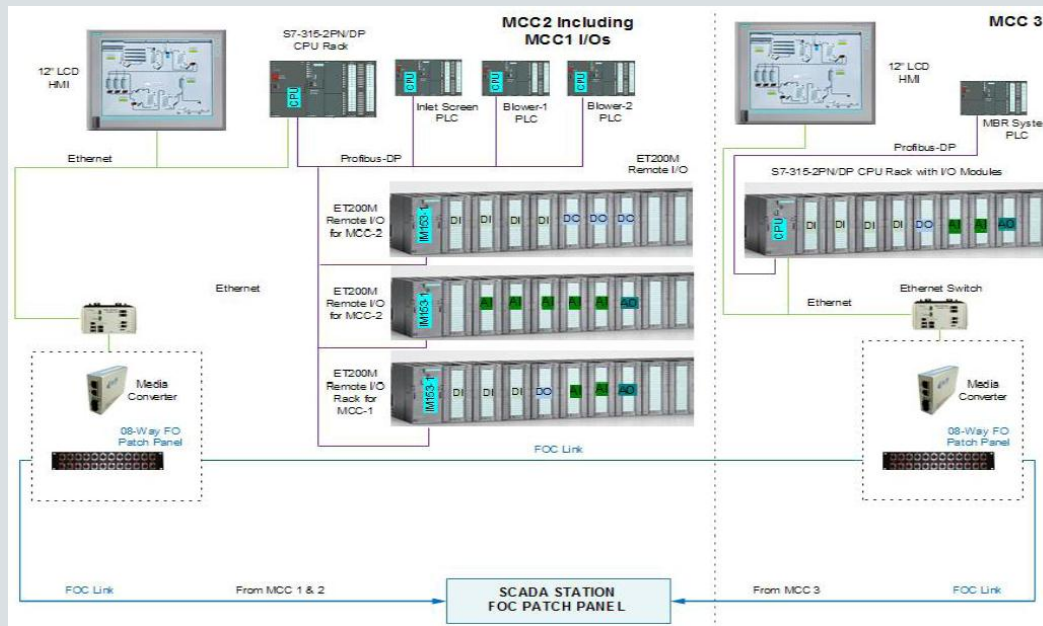


Automation

Implementation by the Solution Partner:

The primary elements of the offered Control System comprised of: -

- Multiple S7-315-2 with S7-300 IO's and MP-377 Operator Stations
- Interfacing with VFD's, Generator, LV Panel & Pump Control Starters on Modbus / Profibus
- WinCC Server / Client Architecture



Benefits for the customer:

- De-centralized Architecture
- Easily expandable
- High flexibility and uniformity
- Ease of Operations
- Alarming, Security, Data Logging & Archiving
- Automatic Reporting Facility

