

New PLC System for K-6802 Ammonia Refrigeration Compressor for Urea Plant

Petrochemicals

Ammonia Refrigeration

Compressor Control



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Founding year:

1999

Solution
Partner

SIEMENS

Automation

Solution Partner: Prudent Solutions WLL
Customer: Gulf Petrochemical Ind. Co.
Segment: Gas Compressor

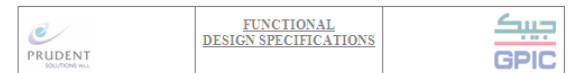
Requirements of the customer:

- The Urea Plant of Gulf Petrochemical Industries Co. (GPIC), Bahrain is equipped with an Ammonia Refrigeration Unit U-6902 for Urea Granulation system. This unit was equipped with Mitsubishi PLC-supplied, installed and commissioned by MHI Japan in 1998.
- As the Mitsubishi PLC was declared obsolete and in order minimize failure rate, GPIC decided to upgrade the Mitsubishi PLC to a latest, field-proven PLC with Redundancy at CPU, Communication, Power Supply and IO level.
- Prudent Solutions WLL (PSL) was awarded the contract to supply new redundant PLC system based on Siemens S7 architecture.



Short description of the solution

S7-400 based Redundant Control System with Redundant IO's on ET-200M communicating to Honeywell DCS on Modbus.



Functional Design Specification

Upgrade of K-6802 Refrigeration Ammonia
Compressor PLC in Urea Plant

GPIC Purchase Order – S 200704 163 dated 11/04/2007

End User:



GULF PETROCHEMICAL INDUSTRIES CO. (BSC)
P.O. Box 26730, Manama, Kingdom of Bahrain
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Submitted By -



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Major OEM -

SIEMENS

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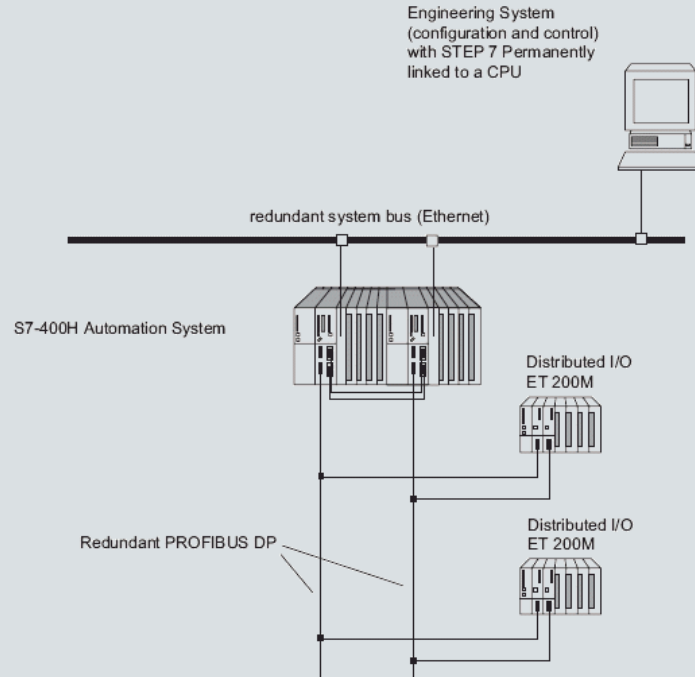
SIEMENS

Automation

Implementation by the Solution Partner:

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

- Dual redundant S7-400 processors communicating with Redundant I/O modules via Redundant Profibus DP network which offers a throughput of 12M bit/sec.



Benefits for the customer:

- High Availability / Reliability
- Easily expandable
- High flexibility and uniformity
- Ease of Operations

