

GPIC - Upgrade obsolete S5 PLC to latest PLC & SCADA for Urea Handling

Petrochemicals

Material Handling

Urea Storage



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Founding year:

1999

Solution
Partner

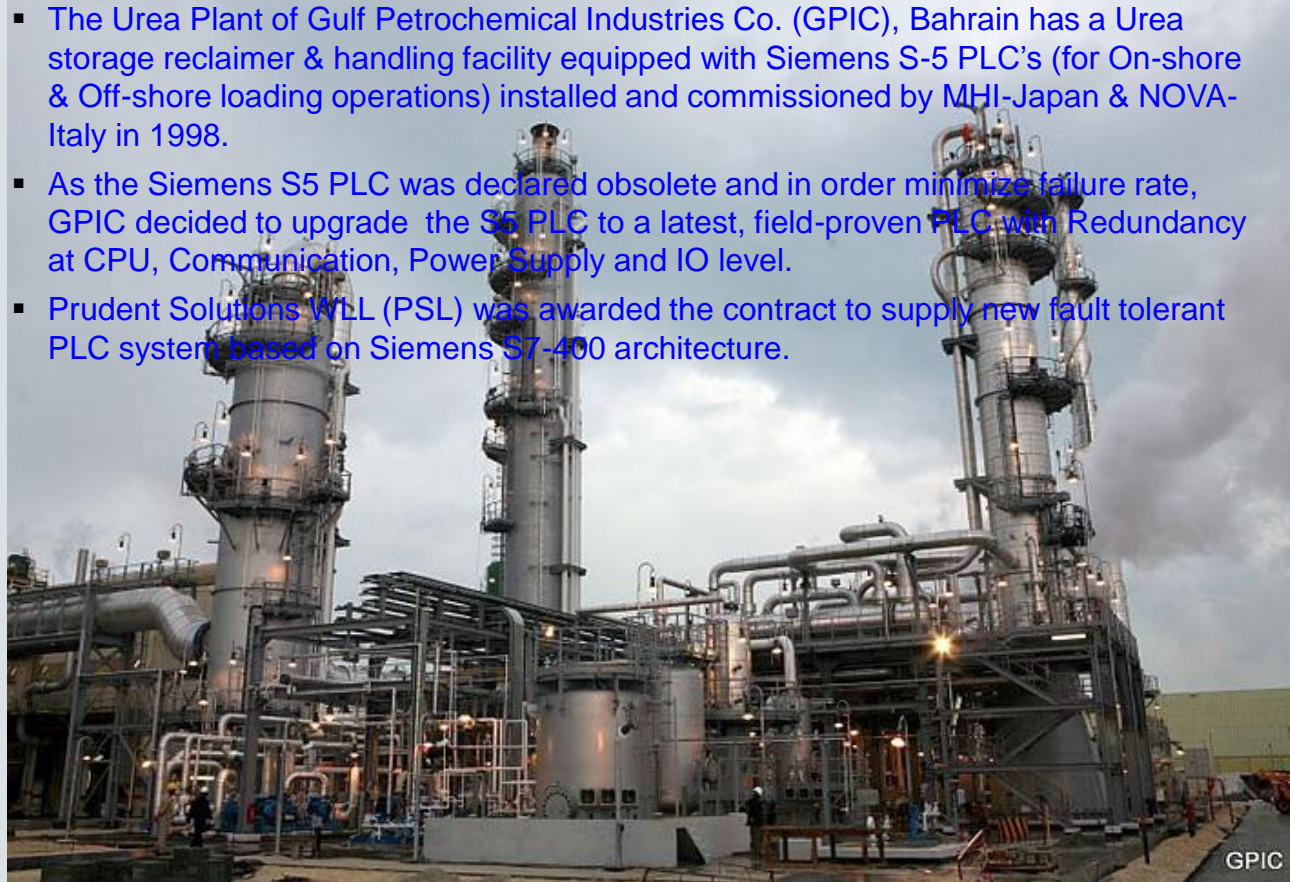
SIEMENS

Automation

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

Requirements of the customer:

- The Urea Plant of Gulf Petrochemical Industries Co. (GPIC), Bahrain has a Urea storage reclaiming & handling facility equipped with Siemens S-5 PLC's (for On-shore & Off-shore loading operations) installed and commissioned by MHI-Japan & NOVA-Italy in 1998.
- As the Siemens S5 PLC was declared obsolete and in order to minimize failure rate, GPIC decided to upgrade the S5 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 fault-tolerant PLC system based on Siemens S7-400 architecture.



Short description of the solution

Totally Integrated Automation (TIA) with Siemens STEP-7 PLC offering Redundant Processor / Power Supply / Communication & IO's and WinCC SCADA



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Implementation by the Solution Partner:

- High Availability implementation using independent S7-417H systems with redundant I/O's (on ET200M) at UHCR, MLCR & Reclaimer
- WinCC SCADA System with Redundant Server & 4 Clients on Dual FO-ring Ethernet network
- Reclaimer PLC connected on wireless Radio Modem

Benefits for the customer:

- Entire upgrade executed in 7 days plant shutdown
- Can be centralized or distributed operations
- High Availability / Reliability
- Highly scalable & standardized system design
- Radio communications avoided expensive cable laying on the moving reclaimer crane

