COMBIT

Information

UniPark®

UniPark, Terminal Management System

UniPark, Terminal Management System, is a modular software and hardware system comprising an automated process management system and run-time accounting systems for crude oil, oil products and chemical tank farms.

UniPark-TM (Technological Management)

Functionality of terminal management system UniPark-TM:

Monitoring and management of a tank farm process equipment:

- remote control of equipment (pumps, valves)
- automatic shutdown by process safety system
- automatic preset level shutdown of pumps (level in tanks, collectors, mobile receivers)
- automatic execution of process blocking at activation of alarms

Representation of control objects on the monitors of operators' stations:

- valves – opened/closed, local/remote control, failure
- pumps – on/off, failure
- tanks – analogue/discrete levels, filling/emptying rate, temperature
- highlighting of flow routes on mnemonic diagrams

Operator notification:

- tank maximum level
- equipment failure
- activation of process safety system
- operation of fire alarm system
- exceeding of permissible vapour concentration level

Data logging:

- equipment condition changes
- tank level changes
- activation of alarm
- operator's instructions

UniPark-PA (Product Accounting)

Functionality of run-time product accounting system UniPark-PA:

Logging and accounting of product movement operations:

- reception
- delivery
- internal transfer (from tank to tank)
- supplementary process operations (discharge of cargo water, tank cleanout, etc.)

Making a run-time commodity balance for selected:

- time periods
- types of product
- types of product movement
- tanks
- operators
- technological operations

Registered parameters:

- product amount
- product density
- product weight
- type of the product movement operation
- operation starting and finishing time
- product type (grade)
- person in charge (operator)

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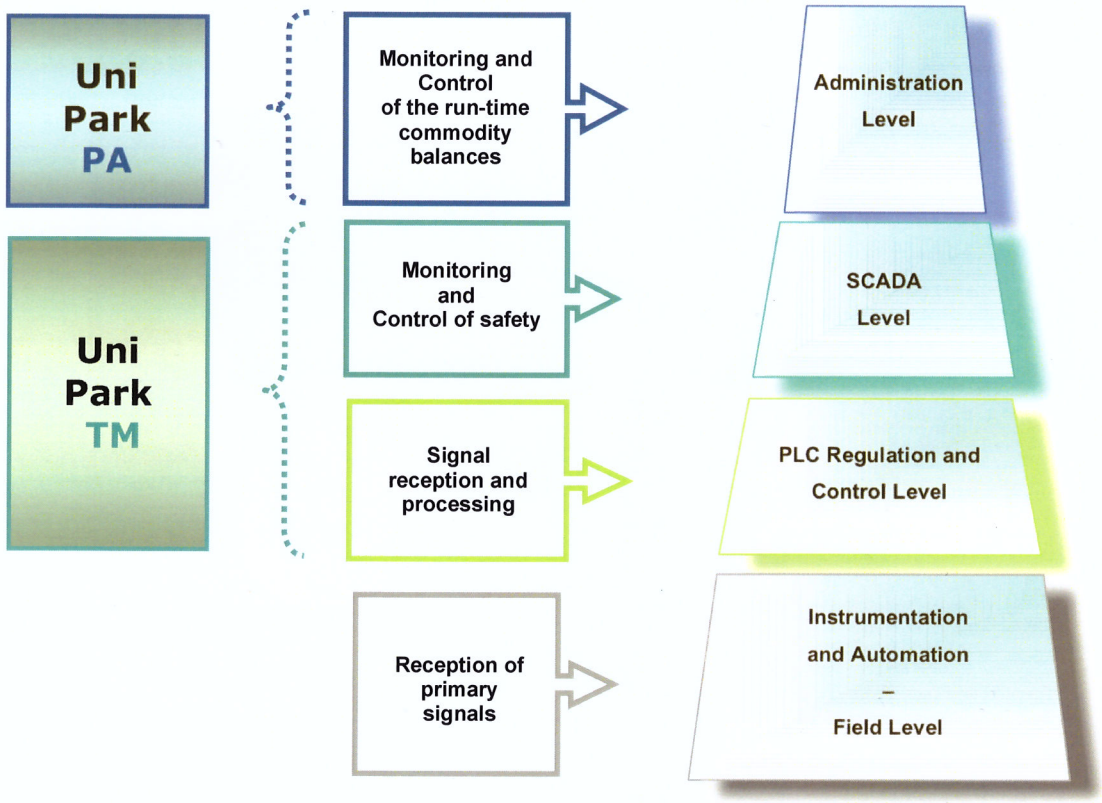

Advantages and capabilities of the UniPark

1) Decrease the costs of the automation project implementation thanks to:
- reduction of the project development amount, time and costs;
- reduction of the installation and commissioning amount, time and costs

2) Increase technological and ecological safety of the tank farm thanks to:
- reduction of human factor impact upon process management
- constant automatic diagnostics of the technical condition of the management system elements (incl. instrumentation)
- integration of the existing fire alarm system
- integration of the existing vapor control system

3) Integrate automatic fire extinguishing system

4) Reduce and simplify the process of personnel training

5) Simplify the process of system operation thanks to:
- intuitive interface
- visualization of the process and its parameters in real-time mode
- automatic notifying the operator about management system elements operation faults and failures with the faulty element indication
- automatic blocking of incorrect process modes
- automatic blocking in case of emergency

6) Raise production and economic effectiveness thanks to:
- efficiency and reliability of the received information at each phase of the technological process
- optimization of use and increasing of a tank farm throughput capacity
- monitoring and logging of all the events and phases of the technological process
- increasing of the overall fail-safety level of the management system

7) Make the following types of analysis of the tank farm operation on the basis of technological process data logging:
- commodity
- technological
- technical

8) Ensure openness of the UniPark architecture:
- compatibility with different instrumentation elements including those existing at the company;
- compatibility with other software products.

9) Make enlargements and upgrades of the management system by adding standard modules:
- without interruption of the production process;
- without any major costs;
- without retraining of the personnel.

10) Use a remote access system:
- for the company management in order to receive active status information and reports about the tank farm;
- for the maintenance personnel in order to receive help and advice of the developer on-line.

11) Chose hardware and software facilities to implement the automation project:
- control system based on SCADA packages: InTouch, Factory Link or WinCC;
- hardware facilities: Modicon or Siemens PLCs.

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