

Monitoring and Diagnostic in the New Plants

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Monitoring and Diagnostic

▶ Monitoring

◆ Main task of the I&C

- Monitors and controls the processes in the nuclear and conventional part of the plant
- Integrates several protection systems and
- Large scale data acquisition and archive system

▶ Diagnostic

◆ Add on Systems

- Support the operator during normal plant operation
- Servess with additional information about the conditions of operational important components
 - Valves and actuators
 - Pumps and other rotating machines
 - Mechanical condition of the NSSS (primary and secondary side)
 - Loose or loosened parts in the primary loops.

Monitoring and Diagnostic

▶ System considerations

◆ Diagnostic systems

- Should operate in parallel to I&C
 - Reduce the I&C computer load
 - Increase redundancy and stability
 - Realize diversity Monitoring and Diagnostic
- Use commercial available hardware (as far as possible and reasonable)
- M&D software integrates technical know how of the supplier company
- Should provide information to the plants management system
 - Outage planning
 - Condition based maintenance
 - Spare parts and other resources planning