DESIGN AND MAINTAIN A SAFE, RELIABLE POWER DISTRIBUTION SYSTEM

Intergraph® SmartPlant® Electrical helps you increase quality, reliability, and efficiency in electrical design, construction, operation, and maintenance. SmartPlant Electrical stands up to today’s rigorous demands of compressed schedules and operating budgets, fixed-price contracts, and concurrent engineering. It delivers clear benefits by:

- Offering a life-cycle solution – from conceptualization to detailed design to operations, maintenance, and decommissioning
- Saving time and cost through automation, such as batch load balancing, automatic drawings and diagrams, report generation, and change management
- Maintaining and enforcing standards, such as corporate rules and plant-specific dictates
- Integrating with the advanced analysis solution from ETAP
- Adding detailed wiring and design capabilities with a new module

SMARTPLANT ENTERPRISE SOLUTION

The data generated from the combined knowledge of your engineers is one of your company’s greatest assets. SmartPlant Electrical helps define, maintain, and preserve the value of your corporate knowledge and data assets throughout the life cycle of a project and plant. You can apply industry, government regulatory, corporate, client, or plant-specific standards to your design to ensure compliance, consistency, accuracy, and efficiency, reducing the chance of errors and costly overruns. SmartPlant Electrical covers each stage of the workflow, from engineering with validation through the bi-directional ETAP interface, through detailed design such as wiring and panel designs, cable routing, etc.

A LIFE-CYCLE SOLUTION

The backbone of plant design, operations, and maintenance is an easily maintainable and reliable electrical distribution system with up-to-date information. SmartPlant Electrical addresses the electrical needs of the entire life cycle of the plant, from concept to detailed design through operations and maintenance, including start-up, continuous operation, emergencies, and shutdowns.

Automatically generated deliverables as “view” of the design data

Automatic generation of diagrams and schematics provides engineers with a new freedom to expand and optimize the electrical system using “what-if” scenarios, without worrying about the high cost of drawing generation or which CAD package the project uses. Plus, the automatically created deliverables are a true and consistent representation of the design data. Because SmartPlant Electrical is completely configurable, you can customize symbols to suit your or your customers’ standards. And with document association, any document or file with a selected set of tags can be associated, and you will be able to view the documents. The solution supports several standards, such as KKS for the power industry.

Extend the scope of SmartPlant Electrical with detailed wiring

The new SIGRAPH®-powered SmartPlant Electric module extends the current scope of SmartPlant Electrical with detailed design tasks for engineering and manufacturing electrical panels, including factory acceptance testing (FAT), construction, and operations of the electrical distribution and controls.

Since SmartPlant Electrical is focused on power distribution, change modules focus on the detailed wiring and panel designs. The two tasks are integrated through SmartPlant Enterprise to enable a consistent and high-quality design.
The SmartPlant Electrical solution will enable you to create deliverables, such as wiring connection drawings, point-to-point connection lists, panel layouts, and various reports, in support of all the workflow stages in electrical engineering and design for the process, power, and marine industries.

SmartPlant Electrical offers a unique solution with an extended set of electrical engineering capabilities that can handle the largest, most complex projects with a high degree of efficiency. In addition, the solution offers tools like change management to lower the risk in both the project phase and the operational phase.

Standards and data reuse
SmartPlant Electrical helps you make the best use of data assets the company already possesses. Features within SmartPlant Electrical provide defaults that you can use to increase quality and efficiency during plant design, operations, and maintenance, using best practice solutions to support lower maintenance cost and risks. Default data and values can be entered to maintain design integrity and enforce corporate standards.

The ability to save and reuse reference data sets for different projects and other customers can speed your current work practices and improve your competitiveness in the market. The SmartPlant Electrical solution offers rules to validate your data and increase consistency, and helps you make the right decisions early.

Flexible Operations
SmartPlant Electrical can create, organize, and maintain large quantities of data or entities, or manipulate data on a “one-by-one” basis. A project with more than 1,000 loads, for example, was executed with SmartPlant Electrical. The Apply Options feature adds tremendous flexibility, such as dynamically associating and creating power cables and control stations and their control cables (implied components), along with their default data for selected electrical equipment. Integration with SmartPlant 3D for cable routing and SmartPlant Instrumentation for common wiring documentation further enhances flexibility.

Report Generation
SmartPlant Electrical provides two different types of reports: graphical reports and tabular reports. Graphical reports include schematic drawings, single-line diagrams, wiring diagrams, and cable block diagrams. Once the design is complete, you can generate these graphical reports and save them to any of the major commercial CAD formats (SmartSketch®, AutoCAD, and MicroStation) or as a PDF. Tabular reports using the standard Microsoft® Excel® report mechanism link to the project database.

SmartPlant Electrical provides you with standard reports that can be customized or used as a baseline for new custom reports, such as:
- Electrical equipment indices
- Cable schedules
- Cable take-offs (BOM)
- Electrical load lists
- Load per MCC
- Power Distribution Board (PDB) schedules

SmartPlant Electrical provides complete component information to make your electrical engineering workflow truly intelligent.

About Intergraph

Intergraph is the leading global provider of engineering and geospatial software that enables customers to visualize complex data. Businesses and governments in more than 60 countries rely on Intergraph’s industry-specific software to organize vast amounts of data into understandable visual representations and actionable intelligence. Intergraph’s software and services empower customers to build and operate more efficient plants and ships, create intelligent maps, and protect critical infrastructure and millions of people around the world.

Intergraph operates through two divisions: Process, Power & Marine (PP&M) and Security, Government & Infrastructure (SG&I). Intergraph PP&M provides enterprise engineering software for the design, construction, and operation of plants, ships, and offshore facilities. Intergraph SG&I provides geospatially powered solutions to the defense and intelligence, public safety and security, government, transportation, photogrammetry, utilities, and communications industries.

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