Using the Kenexis Effigy® Fire and Gas Mapping Toolkit

KENEXIS
INSTRUMENTED
SAFEGUARD SUITE

An essential and complete guide on use of the Kenexis Effigy® Fire and Gas Mapping Toolkit. Effigy® is an essential component of the Kenexis Instrumented Safeguard Suite of applications for development of the design basis of a full range of instrumented safeguards employed at process facilities.

Expert training on these vital issues:

- **Understand** the hardware and software architecture of the Kenexis Instrumented Safeguard Suite along with desktop requirements for accessing and working with this enterprise software application
- **Learn** to incorporate facility data and administration information for an FGS project
- **Understand** how facilities are broken down into zones and how zones are described in the overview section of each study
- **Learn** how to input information about the physical layout of a plant, including definition of equipment items which may also be leak sources that generate loss of containment scenarios
- **Learn** how to include a full range of FGS detection equipment in your study, including optical fire detectors and point an open path gas detectors
- **Learn** how to execute fire and gas mapping algorithms using the operations required to develop desired results
- **Learn** how to work with SRS checklists and SRS template files to ensure that safety requirements specifications are complete and comprehensive
- **Understand** the FGS mapping results including geographic coverage, geographic risk, and scenario coverage for fire detection and gas detection

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KENEXIS is an engineering and consulting firm specializing in the application of instrumented safeguards, such as fire and gas systems, to the process industries. Our years of experience give us unparalleled insight into specifying and verifying the safety requirements of a wide range of processes.

Training Course Overview

Performance based fire and gas system design in accordance with the ISA 84.00.07 technical report and its safety lifecycle is recognized and generally accepted good engineering practice. Implementation of the FGS lifecycle using an enterprise software application will increase consistency and quality of the FGS design basis while streamlining the workflow, resulting in a higher quality study at a much lower cost. This course explains how to use the Effigy® Fire and Gas Mapping Toolkit component of the Kenexis Instrumented Safeguard Suite to perform all of the coverage verification tasks required by FGS design technical reports.

Section 1 – Introduction and Scope

◆Introduction to the Effigy® fire and gas mapping toolkit
◆Goals to be achieved during the course

Section 2 – Application Access

◆Application Architecture, access requirements
◆Access requirements and methods
◆Working with user accounts
◆Login and account settings adjustment exercise

Section 3 – Handling Multiple Studies

◆Project Manager navigation overview
◆Working with the Facility Manager
◆Browsing the study list
◆Using study templates
◆Setting study baselines and tracking revisions
◆Importing and exporting study data

Section 4 – Study Overview

◆Navigating Effigy
◆Entering study overview information
◆Working with overlays
◆Entering and editing grading definitions
◆Entering and editing wind direction information

Section 5– Facility Equipment Data

◆Adding Equipment Items / Obstructions
◆Assigning graded areas to equipment items
◆Assigning fire scenarios to equipment items
◆Assigning gas release scenarios to equipment items

Section 6 – Fire Detector Data

◆SIL selection data entry overview
◆SIL selection study style options (implicit LOPA, explicit LOPA)
◆SIL select worksheet fields and options
◆Independent protection layers
◆The non-SIS IPL worksheet and register
◆SIL selection worksheet calculation overview
◆SIL selection exercise

Section 7 – Gas Detector Data

◆Overview of SIS equipment database format
◆Using a custom failure rate database
◆Project failure rate database vs. standard database
◆Project user entered failure data
◆Incorporating external calculations for complex devices and system using black box models
◆Database manipulation exercise

Section 8 – Running Coverage Calculations

◆Selecting calculations to execute
◆Calculation options
◆Calculation engine feedback

Section 9 – Viewing Results

◆Fire/Gas Detection Geographic Coverage
◆Fire/Gas Geographic (Scenario) Risk Profile
◆Fire/Gas Detection Scenario Coverage (Residual Risk Profile)

Section 10 – Summary

◆Review of toolkit sections and usage

Who Should Attend?

◆ Control Systems Engineers
◆ Fire and Gas Systems Engineers
◆ Process Safety Professionals
◆ Engineering Management

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