SMARTPLANT 3D (SP3D)

Session Management

- Session template
- Session File
- Options

View Manipulations
- Common Views
- Zoom Tool
- Window Area
- Refresh View
- Active View Control
- Rotate View
- Looking at Surface

Formatting Active View

- View Format
- Surface Style Rules

Filters

- System
- Assembly
- Spatial (Volume or Planes)
- Logical Permission Group
- Object Types
- Properties

Insert Options

- Control Points / Notes / Hyperlink
- Distance
- Minimum Distance between Objects
- Angle
- Tool Tips
- Label Editor

2. SP3D Equipment Training

- Standard Parametric/Non-parametric Equipment Placement.
- Modeling of equipments using primitive shape.

- 3rd party software – SAT format (Solid Edge v-14)
 Aspects
- Physical, Insulation, Maintenance, and so on

Ports
- Piping port
- Ducting port
- Cableway port
- Conduit port
- Cable port
- Foundation Port

Placing Design Equipment

- Equipment from Catalog (standard)
- By Shapes

Relationships / Constraints

- Mate
- Align
- Connect
- Minimum Distance (E-W, N-S, Vertical)
- Parallel
- Mate to Tangent Plane

SmartSketch Options

- Pinpoint
- Locate on Display List
- Locate on List Only

Manipulation Commands

- Select Command
- Delete Command
- Undo Command
- Move Command
- Rotate Equipment
- Rotate Command
- Open the properties page
- Copy/Paste Command

Place Imported Shape from File

- Equipment from SAT

Place Equipment From PID File

• Retrieving PID

• Placing Equipment from PID
• Comparing Data
• Updating Data
Nozzle Placement
• Placing Nozzles with Graphics
• Nozzles with no Graphics
• Nozzles From PID
Modification
Property Page

3. SP3D Structural Training

• Grids
• Coordinate Systems
• Smart Plant Structure
• Grid Wizard
• Placing Coordinate System
• Modifying Grids
• Adding Grid Planes
• Rotated Coordinate Systems
• Rotated Planes
Member Types
• Beams
• Columns
• Braces

Member Properties

• Name Rule - Naming rule
• Parent System
• Type Category
• Type
• Priority
• Continuity
• Cross section
• Section Standard
• Section Type
• Section Name
• Material
• Grade
• Angle
• Cardinal Point

Place Linear Member System

• Place Member Ribbon Bar

Frame Connections

• Flush
• Seated
• Centerline
• Axis
• Corner Brace
• Surface
• Unsupported
• Manual or Automatic rule-based selection
Vertical Brace Connections
• Rule-based Offset
Assembly Connections
• Assembly Connection Ribbon Bar
• Base Plate
• Splice
• Fitted Assembly Connection
• Corner Gusset Plates

Modifications

• Attributes
• Generic Move Command
• PinPoint
• Point Along Tool
• Frame connection

Slabs

• Coincident plane
• Offset from plane
• Angle from plane
• Point/Normal Vector
• 3 Point plane

Sketch 2D

• Basic Sketch

Holes / Openings

2D overview

- Sketch method
- Select an opening from Catalog
- Draw (Sketch 2D)
- Footings
- Footing Ribbon Bar
- Property Page
- Placement
- Modifications

Equipment Foundations

- Equipment Foundation Ribbon Bar
- Property Page
- Placement
- Modifications

Stairs/Ladders

- Settings
- Top Support
- Bottom Support
- Reference
- Position
- System
- Type
- Name
- Width
- Angle
Handrails
- Settings
- Properties
- Sketch Path
- Type

- Modifying Path

Reports

- Running Reports

4. SP3D Piping Training

- Pipeline
- Pipe Run
- Features
- Parts

- Port
- Path leg
- Connections

New Pipe Run

- Define the Pipe Run properties

Route Pipe Command

- Length Control Tool
- Route Pipe Run with Pinpoint
- Angle Control Tool Ribbon Bar
- Pipe Run Smart Step Ribbon Bar

Working Plane Control Tool

- Plane Lock Options

Turn Type option

- Default Turn Options
- Selecting a Turn Type

Pipe Select Command

- Select Fitter Options

Delete Command

- Delete Pipeline
- Delete Pipe Run
- Delete feature

Routing From End Features or Nozzle

- Connecting to End Feature
- Connecting to Nozzles

Routing To or From a Straight Feature

- Branch on Pipe Run
- Intersect to Branch

Insert Component command

• Selecting a Component
• Reference Position
• Point Along option
• Selecting Different Ports / Flip
Edit Commands
• Edit Straight Features
• Edit End Features
• Edit Run Change Features
• Editing features

Insert Split command

• Insert Split ribbon bar

Edit Properties Command

• Flow Direction
• Insulation
• Relation Tab

Route Pipe Run using the offset value

• Offset Control Tool

Insert Component – Piping Specialty /

Instruments

• Component by Tag
• Piping Specialty
• Instruments

Routing Sloped Pipe

• Slope Format
• Route Sloped Run
• Turn Slope Lock

Route Flanged Pipe

On/Off

• Flanged Spec
• Modifying Flanged Pipe

Route Using Spherical Coordinates

• Relative Tracking Mode

Routing Using PID (TEF)

• Retrieving PID
• Routing from PID
• Comparing Data
• Updating Data
TAPS
• Insert Tap Command
Reports
• Running Reports
Interactive Clash
• Setting Local IFC

Running Local IFC

5. SP3D Electrical Training

• Electrical System
• Cableways
• Cable tray / Conduit
• Cables

Route Cableway
• Define Properties
• Using Pinpoint
• Using SmartSketch
• From End Features
• To End Features
• To Straight Features
• Using Relative Tracking
• Using Spherical Coordinates
• Using Offset Option
• Routing From Ports
• Placing Transitions / Size Change

Branches

• Branch on a Run
• Intersect to Branch
• Branch using Pinpoint

Insert Component command

• Selecting a Component

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- Reference Position
- Point Along option
- Selecting Different Ports / Flip
Routing Cableway – No Part Spec
- Routing Cable way

Insert Transition

- Without offset
- With Offset

Edit Commands

- Edit Straight Features
- Edit End Features
- Edit Cross Sections

Routing Conduits
- Conduit System
- Route Options

Conduit Fittings

- Insert Conduit Fittings

Place Electrical Equipment

- Placing Junction Box
- Placing Light Fixtures
- Creating MCC
- Placing Cable/Nozzle Ports

Placing Ducts

- Placing Ducts using Cableway

Extracting Pipeline Isometric Drawings
Creating Spools Extracting Spool Drawings
Isometric Options Browser   Alias Options
Labels   • Component Note (Type 1 Labels)
- End Connection (Connection note and nozzle
  note labels)
- Misc Spec labels (Pipeline header)
- Weld list labels
- Drawing Frame (title block labels)

Title block

Insert Cables

- Selecting Equipment
- Selecting Cables
- Defining Properties

Define Cable Path

- Selecting Cableways able Markers
- Defining Exit/Entry points
Placing C
Reports
Running Reports
6. SP3D HVAC Training
Route Duct Command
Start routing a Duct Run from:
- A point in space
- An existing Duch run
- An equipment HVAC port

Create Duct Run Dialog Box

Define the Duct Run properties

- System, Name, Spec, Required Flor rate,
insulation, Max design velocity and Max.
Pressure loss.

Insert split Features
Insert Component Features
HVAC Division
Select the End Feature
Insert Transition Features
Insert surface mounted Features
7. SP3D Isometric Drawings Training

- Attribute MAP
- Mapping attributes to the border

Material list

- Fixed - Style 1
- Variable - Style 2
- User-defined - Style 3
- Various material list options
- Material list labels