



## CADWorx - Plant Design Training (IGT-PD)

**Course Length:** 5 Days

This course is designed for the fresh graduates and plant designers who want to become familiar with the latest software tools available for Intelligent Plant Modelling and to produce Intelligent P&ID drawings. This course helps the user to understand the underlying concepts behind data centric Intelligent P&ID and to customize the software to the specific requirements of their organization so that project deliverables can be generated dynamically. The course extensively covers all the areas of Plant design and enables the designers to use the CADWorx Software effectively and make them productive from day one.

### Prerequisites:

- Drafting, design, or engineering experience is required.
- Basic Plant design/ engineering knowledge is required.
- Working knowledge of AutoCAD.
- It is also recommended that you have a working knowledge of Microsoft® Windows® XP, Microsoft® Windows® 2000, or Windows NT® 4.0.

### Curriculum

#### Day 1

- ❖ Introduction to Intelligent P&IDs
- ❖ Advantages of Data driven, intelligent P&IDs
- ❖ Creation of Proposal Style P&ID (non-intelligent) using COADE enhanced drafting tools to increase productivity
- ❖ Project creation and customization
- ❖ Sample P&ID Project

#### Day 2

- ❖ Project Setup and Customization
- ❖ Customizing the software for specific project needs (symbols, database, etc.)
- ❖ Complete creation of project P&IDs in a project environment.
- ❖ Turning proposal P&IDs into intelligent project P&IDs
- ❖ Producing Project deliverables and reports from the project data that include line list, instrument list, equipment list, etc.
- ❖ Hands on Exercise to create a Database driven P&ID and other deliverables.
- ❖ Introduction to Loops module.
- ❖ Creation of Instrument loop drawings and Loop templates
- ❖ Publish Intelligent P&ID on Internet/Intranet, for project members to view and verify.
- ❖ Create Instrument Datasheet and Equipment Datasheet
- ❖ Sample P&ID Project, involving deliverable such as line list, valve list, etc.



### Day 3

- ❖ Fundamental concepts of 3D Plant Models
- ❖ Introduction to CADWorx Plant Design Suite.
- ❖ Basic drawing in two dimensional
- ❖ Connection techniques and automatic dimensioning
- ❖ Automatic plans and elevations
- ❖ Components insertion methods
- ❖ Point and Shoot UCS
- ❖ Automatic Pipe Routing
- ❖ Interference checking
- ❖ Weld features
- ❖ Creating generic components
- ❖ Bulk Bill of material
- ❖ CAESAR II and CADWorx/Pipe Bi-Directional Link
- ❖ Link to P&ID Database

### Day 4

- ❖ Parametric Equipment Builder
- ❖ Bi Directional Link with PVELITE
- ❖ Steel- Structural Modeling
- ❖ Frame creation and special steel objects such as ladders, stairs etc.
- ❖ Bill of material for steel components
- ❖ Creating generic steel components
- ❖ HVAC and Cable Tray modules
- ❖ Project Database and configuration setup
- ❖ 3D Plant Model organization, layer system, line numbers, Xref
- ❖ Model Workshop

### Day 5

- ❖ Manual development of isometrics
- ❖ Automatic development of isometrics
- ❖ Creating two dimensional drawings from isometrics
- ❖ Exporting to CAESAR II
- ❖ ISOGEN Project Setup and Customization
- ❖ CADWorx Project Setup
- ❖ Project Database and configuration setup
- ❖ 3D Plant Model organization, layer system, line numbers, Xref, Dropdown list setup.
- ❖ Specification creation
- ❖ Line Number Setup
- ❖ User Shape creation
- ❖ View Box Setup
- ❖ Model space and paper space setup
- ❖ GA Drawing Creation from 3D Model
- ❖ Dimensioning and annotation
- ❖ 3D Visualization and Walk-Thru

## ImageGrafix Software FZCO

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