AutoCAD Structural Detailing for Piping Designers

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Code PD1913

Learning Objectives

At the end of this class, you will be able to:

- Describe the workflow in AutoCAD Structural Detailing
- Add and remove profiles from the working set
- Generate a structure model
- Create detail drawings

About the Speaker

Kyle Pope has worked for ECAD, Inc. since 1999 doing sales, training, and tech support on Process and Power Products at their Tulsa, OK location. Kyle became involved in the Process and Power Industry in 1994 when he went to work for the Sinclair Oil Company in Tulsa, OK doing everything from recovery well monitoring to project management. From there, Kyle moved on to Pro-Quip and ultimately ECAD, Inc. He has been involved in numerous client roll-outs and training sessions all over the US to help educate users and clients. Kyle is also the founder, and partner member of the PDO Team at ECAD, Inc doing blog posts, videos, tech tips and downloads for the Process and Power community
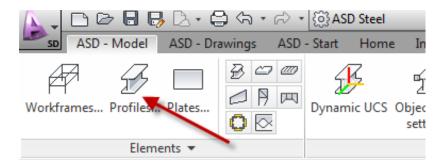
Basic Workflow

AutoCAD Structural Detailing (ASD) is a classic left to right workspace software. The basic methodology of the software is such that the user builds a working set of profiles, builds a structural model, creates groups/assemblies/connections, builds the detail views, and finally assembles the detail views into finalized drawings with BOM and Material lists.

Obviously there is more to it that a few simple steps, but in reality, not much more. The software is intuitive, and the next few steps will outline those for you.
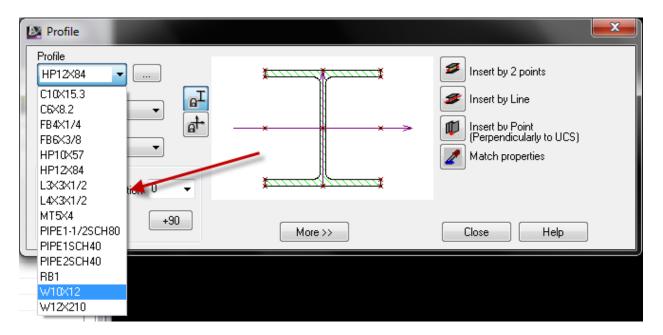
Add and Remove Profiles from the working set

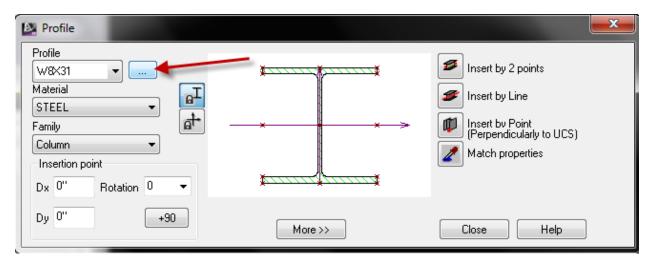Rather than choose from all available steel profiles, ASD reverts to what we refer to as a *Working Set*

This *Working Set* can be added to at any time in the project. This consists of all structural shapes needed, including shapes for stairs, ladders, and handrails. It should also be noted that the user can "mix and match" between standards. An example would be an international job where as built needs to be modeled, in conjunction with a US generated skid.
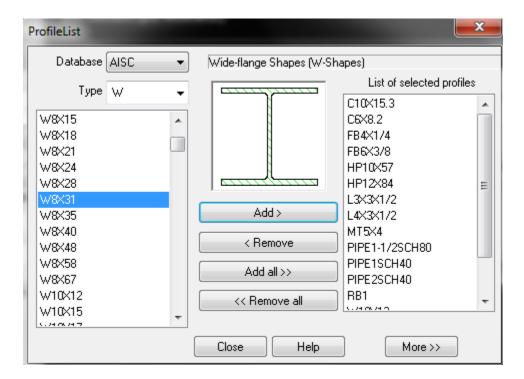
Profiles Button: This is the start point for placing beams into a model

The current working set

The "*3 Dot Button*" to add additional profiles to the working set

Dialog to add additional profiles

Generate a Structure Model

What is there to say? Like with all Autodesk products, there are roughly 1,382 ways to create a model, give or take a few. The easiest, for repeatability is to utilize the workframe. This is especially useful for piperacks that repeat over a great length. You can also utilize standard AutoCAD lines, or freehand if you have construction points.

Create Detail Drawings

Creating Detail drawings is simple, once you remember a few simple things.

These include:

- Grouping your model into assembly, sub-assembly, and overall model grouping
- Assigning positions to the structural members used

Creating the detail drawings is much more than a click, but can be as simple as a click. All detail views are controlled by styles. Styles can be adjusted either at a global level, or for each individual view. In addition, views can be rotated, scaled, and sectioned individually as well.

Once the views are created, it's simply of right clicking a view from the palette and placing it on a layout sheet. Views can be mixed and matched to achieve the final deliverable that you require.

In addition to this document, a video will be provided both at www.youtube.com/PDOTeam as well as on the PDO Team website at www.pdoteam.com