



CADWorx Plant Tips and Tricks

CADWorx Plant is a unique tool used to design structural and piping systems in the plant designer's world. As with any tool, knowing how and when to use it is an important part of any good design. Sometimes, you need to look at alternative ways to develop your models by using different techniques inside CADWorx. In this session, you learn design practices based on industry standards and years of experience to enhance your productivity.



CADWorx Plant Tips and Tricks



Design is just not on the computer, it's
in the field,
at the fabricators,
at the clients
at the vendors,
in the software, and
combinations of all.

Today we explore all!

We need them to come together to accomplish our final product: a sharp, clean, accurate model, fabrication documents, and a happy client.



CADWorx Plant Tips and Tricks

Shortcuts for AutoCAD and CADWorx:

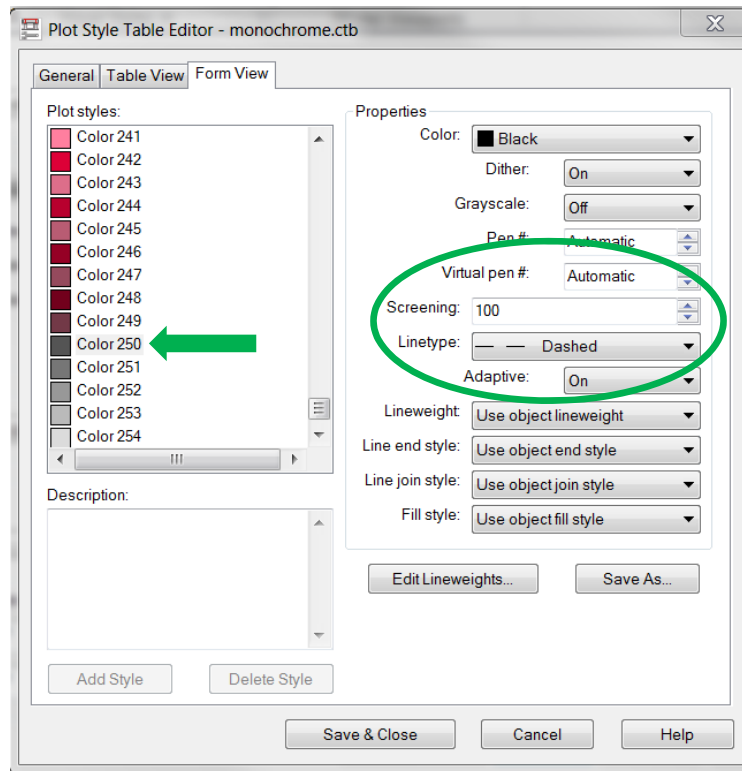
- Configuration files: You can place a configuration file(CFG) in the directory where you store the model, drawing, or other information and pick all the settings in that file.
- Underground piping and items on hidden layer;
 - In your plotting setup (“cbt” files) create several colors that you want gray scaled or dashed.
- Mtext and Dimensions text wipeout – Do not use wipeout. Instead, go into the properties of Dimension or Mtext and set the “fill” to “background”.
- Purge and clean the model to keep your model safe.
 - Purge the model.
 - Type in the old purge “_PU” or “-PU” to get rid of old comments that are still attached.
 - AUDIT – Audit the model to clean up anything else that might be deep in the block or drawing.



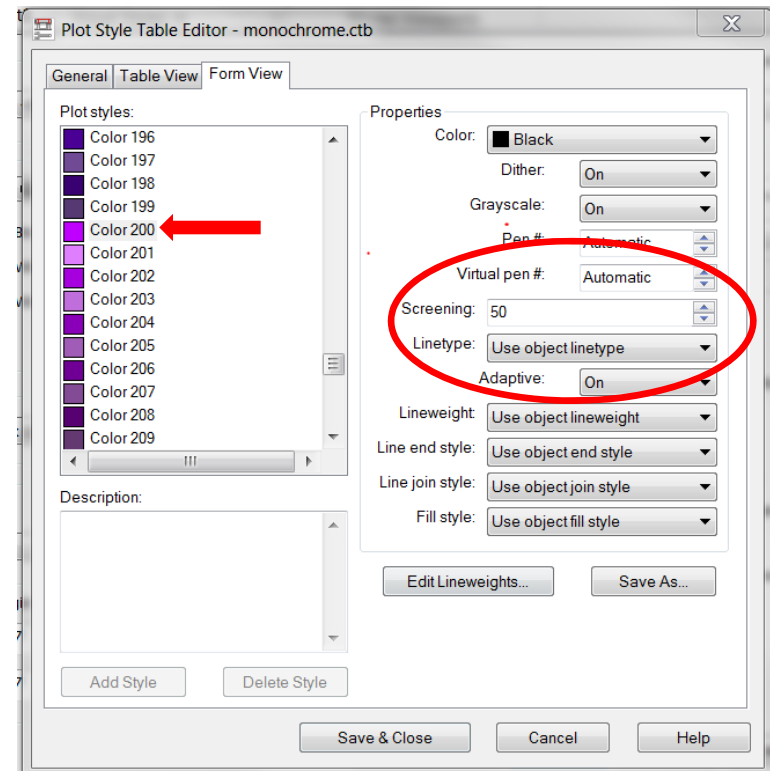
CADWorx Plant Tips and Tricks

- Use the “viewbox” (Pre-set the “viewbox” in your models so all models have the same name views and all the layers can be set).
- Make all your drawing templates for Layouts, Piping Plans, Details, etc. – Set the templates with text styles, dim styles, layers, etc.
- Use cut lines, pipe-ends, baseballs, or others to finish out the graphics in the Paperspace of the drawings you create.
- Preview and print out “PDF” files before you send them to clients. (Sometimes the PDF generator settings leave lines, shadows, or even leave out portions of your drawings). Check your settings before you print.
- When using CADWorx Plant Pro to route piping through areas with 90 degree elbows, turn off “the trimmed elbow rule” in the Piping Rules.
- Set your minimum spacing from a weld to an o-let in the Piping Rules. Recommend 3” from the nearest weld.
- DO NOT change the linetype or linecolor in the Modelspace or Paperspace. (If you must have a different linetype or color, make a new layer with the original layer name at heading (Ex. Steel_your_layer)).

CADWorx Plant Tips and Tricks



- Settings for piping that is hidden underground (Here we set Color 250 to a “dashed” line with 100% screening)



- Settings for graying out items that are not important to your design (Here we set Color 200 to “use object type” and 50% screening)

CADWorx Plant Tips and Tricks



MText

General

Color	ByLayer
Layer	Dim1
Linetype	ByLayer
Linetype scale	1.0000
Plot style	ByColor
Lineweight	ByLayer
Transparency	ByLayer
Hyperlink	

3D Visualization

Material	ByLayer
----------	---------

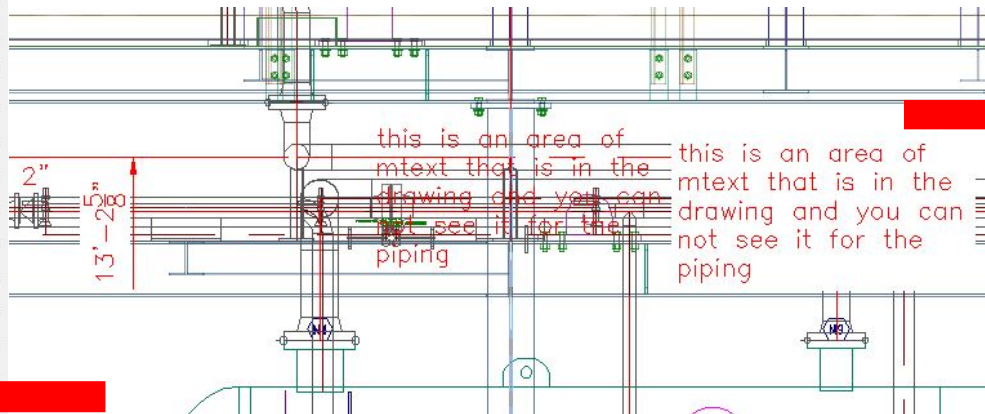
Text

Contents	asdfsdfasf\...
Style	STANDARD
Annotative	No
Justify	Top left
Direction	By style
Text height	0.1250
Rotation	0.0
Line space f...	1.0000
Line space d...	0.2083
Line space st...	At least
Background ...	Yes
Defined wid...	0.1250
Defined hei...	0.0000
Columns	Dynamic

Geometry

Position X	21.0344
Position Y	13.4669
Position Z	0.0000

- Some of the problems with applying text and dimensions is that the drawings become overcrowded. It is a good idea to place text or dimensions in a clear area with non-detailed piping or steel. However, you are still unable to see the text because of the lines of the piping.
- For Mtext and Dimensions – In Properties, under Text you can find Background(in Mtext) or Fill Color (under Text, Fill Color). Change the setting to use “Background” to hide the objects behind the Mtext or Dimension.



Ext line ext 0.0625
Ext line offset 0.0625

Text

Fill color	Background
Fractional ty...	Horizontal
Text color	Yellow
Text height	0.1250
Text offset	0.0625
Text outside...	On
Text pos hor	Second extensi...
Text pos vert	Above
Text style	STANDARD
Text inside a...	On
Text positio...	9.7838
Text positio...	13.0096
Text rotation	0.0
Text view dir...	Left-to-Right
Measurement	158.6250
Text override	

Fit



CADWorx Plant Tips and Tricks

- Project start-up information. (For the perfect project start up)
 - ☐ Scope from client
 - ☐ Piping and Instrumentation Diagram
 - ☐ Line List
 - ☐ Instrument List
 - ☐ Valve List (Type, size, and rating)
 - ☐ Piping specifications (Pipe, fitting schedules, and end preps)
 - ☐ Equipment List
 - ☐ CADWorx piping specs

If you have all this information before the project starts,
you should have a perfect project.

CADWorx Plant Tips and Tricks – PS/MS



- Paperspace annotation and cosmetic
- Make sure all viewports are set to view what you want to see.
- Set to wireframe in Modelspace,
 - Make sure that the viewport is activated before making changes.
 - Turn off any layers that you do not wish to see. (Make sure that you turn off the viewports layers in Layer Manager).
 - You may want to change transparency for some layers on the view port.
 - LOCK the viewport...
- Set to Paperspace
 - Highlight the viewport, right click, go to “shade plot”, set to “hidden”.
 - Dimension in Paperspace, but grip items in model space. (If you attach to a grip in Paperspace and a grip in Modelspace, your dimension is probably wrong).
 - Place all text, line numbers, notes, section, & detail cuts in Paperspace.

CADWorx Plant Tips and Tricks – Layout Tips



Things to consider in design:

- Spacing of equipment and skids– maintenance vehicles, lifts, and more
- How maintenance is done on equipment – exchangers, pumps, and more
- Pipeway or Piperacks
- Wind flow through the site
- Drainage of the site
- If you want additions to the site in the future



CADWorx Plant Tips and Tricks – Layout Tips



<u>Item</u>	<u>Clearance, Etc</u>
Projection - vessel nozzles: 150# thru 400# only*	*Refer to Mech. Flow Sheet Symbols
Size 3" and under	7"
Size 4" thru 10"	8"
Size 10" and over (The above are standard except where vessel drawing specify otherwise)	10"
Minimum spacing for piping in racks - See Pipe Spacing Table (ES-403)	
Vertical distance between elevated banks of piping crossing in opposite directions (TOS-TOS).	18" Min., 1'-0" Nom.
Minimum - top of support from grade for piping on sleepers	1'-0"
Valving - maximum height for operation from grade or platform. Chain operators required for operating valves if above this height.	6'-6" (to bottom of handwheel)
Connecting walkways at platforms - minimum width.	2'-6"
Maximum rise for single stair flight.	18'-0"
Ramps - Maximum angles of rise.	20°

CADWorx Plant Tips and Tricks – Layout Tips



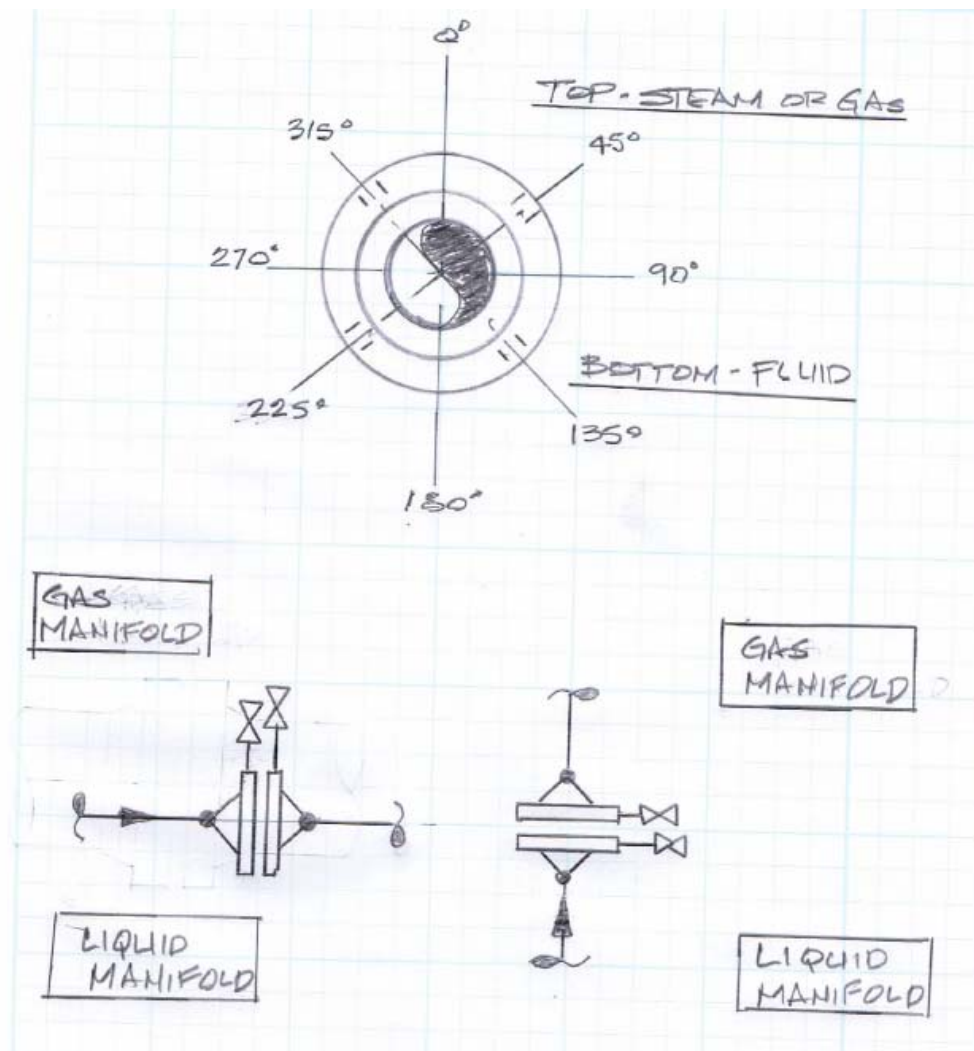
Platforms at elevated horizontal heat exchangers; minimum clearance from equipment flange to nearest obstruction	4'-0" (Front & Rear) 1'-0" (From Edge of Flange)
Platforms at vertical heat exchangers or at tower with flanged top; minimum all sides	3'-0" (From Edge of Flange)
Height of platform - vertical exchangers relative to tube sheet flanges.	2'-6" Preferred 4'-0" Maximum
Maximum height of horizontal heat exchangers without monorail for tube pulling and/or platforms at heads.	10'-0" (*)
Maximum manhole height without platform (to centerline).	12'-0" Above Grade (*)
Maximum LLC, GG, etc. (on base of towers) height without platform-to-centerline.	3'-0" Above Grade (*)
Clearance between exchanger flanges (increase as required for piping).	1'-6" Minimum
Clear headroom for structural members over platforms and walkways.	6'-6" Minimum

CADWorx Plant Tips and Tricks – Design Tips



<u>Item</u>	<u>Clearance, Etc</u>
Desirable rise for stairs, maximum and minimum.	34° -18" to 39° -16"
Maximum height for ladders without safety cages.	15'-0"
Maximum height of continuous ladder without offset and landing.	30'-0" (*)
Maximum height above grade for bottom of ladder safety cage.	7'-0"
Stairways - minimum width.	2'-6"
Stairway landings - minimum width	3'-0"
Manholes and access openings; minimum clearance from equipment flange (not cover) to nearest obstruction.	3'-0" (Front) 1'-0" (Edge)
Manholes above platform	4'-0" Max. 2'-6" Norm. 18" Min.

CADWorx Plant Tips and Tricks – Design Tips



Special Guest Elvedin Okic with ECE Design Orifice set with taps



Intergraph CADWorx Catalog and Specification Editor 2014 SP1 - C:\CADWorx\2014\Plant\Spec\hml\catalog.ctb

Language: English

Home View

Clipboard Copy Paste Cut Size Table Material Schedule Thickness End Type Category Table Add Table Index Code DB Code Table Import Import From Pipe Support Pipe Support By Spec Data File Import Assembly Import Data Catalog Project Transfer Data Export Table Export From Export Data

Catalog Data

Test.ctb

Size Tables

Material Tables

Schedule Tables

Thickness Tables

End Type Tables

Data Tables

Elbows

Valves

Spac Blind/Blood Ring/Exp. Joint

Gaskets/Bolts/Welds

Reducers

Caps

Complings

Crosses

O-Lets

Flanges

Flange Blind

Flange Lap Joint

Flange Slip On

Flange Reducing Slip On

Flange Socket Weld

Flange Threaded

Flange Reducing Threaded

Flange Weld Neck

FLG_WN_150

FLG_WN_1500

FLG_WN_300

FLG_WN_600

FLG_WN_900

FLG_OR_WN_300

Flange Reducing Weld Neck

FLG_RD_WN_150

FLG_RD_WN_1500

FLG_RD_WN_300

FLG_RD_WN_600

Long Weld Neck

Stub

Laterals

Pipe

Strainers

Tees

Unions

Topworks

Pipe Support

User Shapes

Index Code table

DB Code table

FLG_OR_WN_300

MAINS...	LEN	FLG THK	FLG DIA	HDLE	HDSE	PENG	PSB	LLEN	RFD	RFLN	BHD	BCD	BHN	OTD	OTA	OTN	PID	RF	WEIGHT
1.0000	2.2500	1.5000	4.8750	2.252822	1.3150	0	0	0	2.0000	0.0600	0.7500	3.5000	4	0	0	0	1.0500	0	4.0000
1.2500	3.3125	1.5000	5.2500	2.631315	1.6600	0	0	0	2.9000	0.0600	0.7500	3.8800	4	0	0	0	1.3800	0	6.0000
1.5000	3.3750	1.5000	6.1250	1.904809	1.9000	0	0	0	2.8800	0.0600	0.8000	4.5000	4	0	0	0	1.6100	0	8.0000
2.0000	3.3750	1.5000	6.5000	3.379869	2.3750	0	0	0	3.6200	0.0600	0.7500	5.0000	8	0	0	0	2.0700	0	9.0000
2.5000	3.5000	1.5000	7.5000	1.946796	2.8750	0	0	0	4.1200	0.0600	0.8000	5.8800	8	0	0	0	2.4700	0	12.0000
3.0000	3.5000	1.5000	9.2500	4.571796	3.5000	0	0	0	5.0000	0.0600	0.8000	6.6200	8	0	0	0	3.0700	0	15.0000
4.0000	3.6250	1.5000	10.0000	5.639784	4.5000	0	0	0	6.1200	0.0600	0.8000	7.8800	8	0.2500	0	2	4.0300	0	25.0000
5.0000	4.0000	1.5000	11.0000	6.902245	5.3625	0	0	0	7.2100	0.0600	0.8000	9.2500	8	0	0	0	5.0500	0	32.0000
6.0000	3.9375	1.5000	12.5000	7.931252	6.6250	0	0	0	8.5000	0.0600	0.8000	10.6200	12	0	0	0	6.0700	0	42.0000
8.0000	4.3750	1.6250	15.0000	10.69872	8.6250	0	0	0	10.6200	0.0600	1.0000	13.0000	12	0	0	0	7.9800	0	67.0000
10.0000	4.6250	1.8750	17.5000	12.22272	10.7500	0	0	0	12.7500	0.0600	1.1200	15.2500	16	0	0	0	10.0200	0	91.0000
12.0000	5.1250	2.0000	20.5000	14.4246...	12.7500	0	0	0	15.6000	0.0600	1.2500	17.7500	16	0	0	0	12.0000	0	138.0000
14.0000	5.6250	2.1250	23.0000	15.8756...	14.0000	0	0	0	16.2500	0.0600	1.2500	20.2500	20	0	0	0	13.2500	0	186.0000
16.0000	5.7500	2.2500	25.5000	17.8756...	16.0000	0	0	0	18.5000	0.0600	1.3000	22.5000	20	0	0	0	15.2500	0	246.0000
18.0000	6.2500	2.3750	28.0000	20.6766...	18.0000	0	0	0	21.6000	0.0600	1.3000	24.7500	24	0	0	0	17.2500	0	305.0000
20.0000	6.2750	2.5000	30.5000	22.6766...	20.0000	0	0	0	23.6000	0.0600	1.3000	27.0000	24	0	0	0	19.2500	0	378.0000
24.0000	6.6250	2.7500	36.0000	26.6766...	24.0000	0	0	0	27.2500	0.0600	1.6200	32.0000	24	0	0	0	23.2500	0	545.0000

Properties

Component Table

Name: FLG_OR_WN_300

Type: Flange Weld Neck

Size table: Size

Part Number: 5426

Version: 2013.01

Created by:

Edited by:

Description: FLG_OR_WN_300

Short Description:

Tag:

Fields

MAINSIZE: Main Size

LEN: Length

FLG THK: Flange Thickness

FLG DIA: Flange Diameter

HDLE: I-HUB Diameter Large End

HDSE: HUB Diameter Small End

PENG: Pipe Engagement

PSB: Pipe Set Back

LLEN: Lap Joint Length

WEIGHT: Weight

Enhancement

RFD: Raised Face Diameter

RFLN: Raised Face Length

BHD: Bolt Hole Diameter

BCD: Bolt Circle Diameter

BHN: Bolt Hole Number

OTD: Orifice Tap Diameter

OTA: Orifice Tap Angle

OTN: Orifice Tap Number

PID: Pipe Inside Diameter

RF: Fillet Radius

Custom Data

Picture Description

Ready

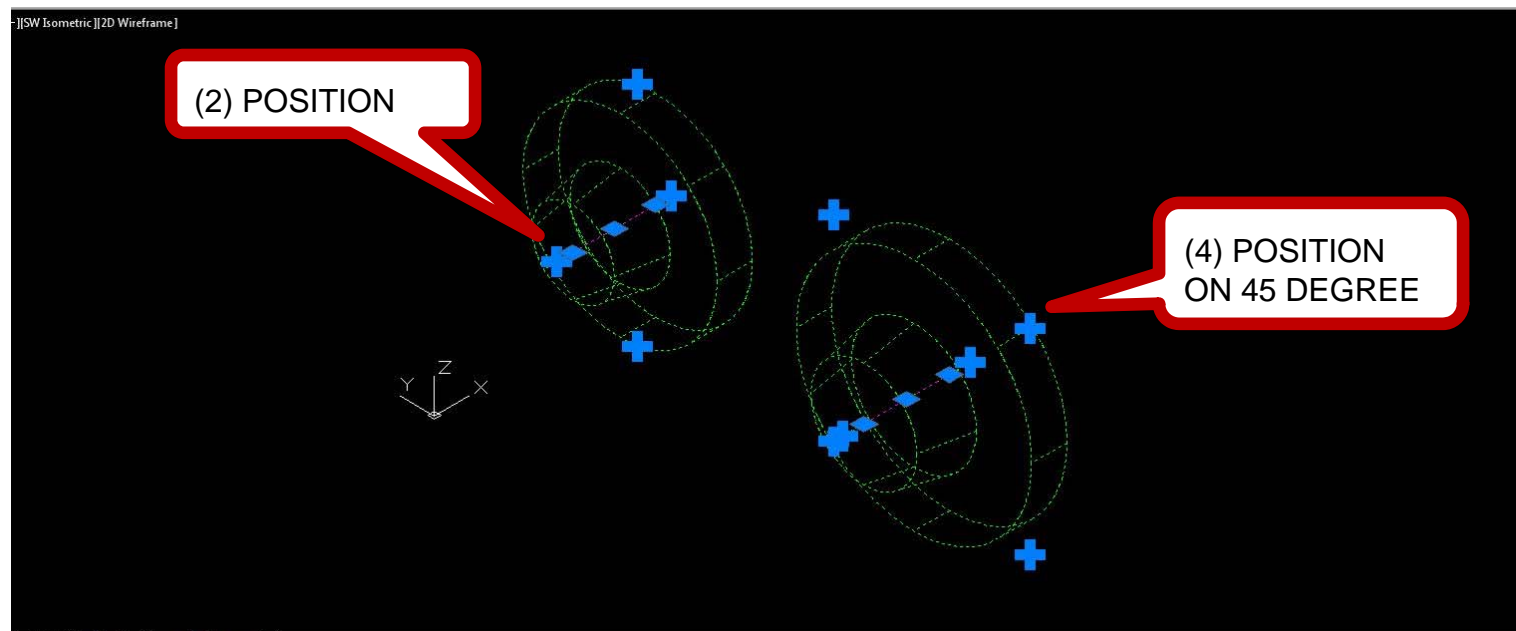
© Intergraph 2014

INTERGRAPH

Special Guest Elvedin Okic with ECE DesignOrifice set with taps

ORIFICE_FLG_RFWN.300

MAINSIZE	LEN	FLGTHK	FLGDIA	HDLE	HDSE	PENG	PSB	LLEN	RFD	RFLN	BHD	BCD	BHN	OTD	OTA	OTN	PID	FLANGE, O...
0.5000	2.0625	0.5625	3.7500	1.1875	0.8400	0	0	0	1.3800	0.0600	0.6250	2.6250	4	0.5000	0	2	0	2.0000
0.7500	2.2500	0.6250	4.6250	1.5000	1.0500	0	0	0	1.6900	0.0600	0.7500	3.2500	4	0.5000	0	2	0	3.0000
1.0000	3.1250	1.5000	4.8750	1.9375	1.3150	0	0	0	2.0000	0.0600	0.7500	3.5000	4	0.5000	0	2	0	4.0000
1.2500	3.3125	1.5000	5.2500	2.3125	1.6600	0	0	0	2.5000	0.0600	0.7500	3.8750	4	0.5000	0	2	0	6.0000
1.5000	3.3750	1.5000	6.1250	2.5625	1.9000	0	0	0	2.8800	0.0600	0.8750	4.5000	4	0.5000	0	2	0	8.0000
2.0000	3.3750	1.5000	6.5000	3.4375	2.3750	0	0	0	3.6200	0.0600	0.7500	5.0000	4	0.5000	0	2	0	9.0000
3.0000	3.5000	1.5000	8.2500	4.2500	3.5000	0	0	0	5.0000	0.0600	0.8750	7.0000	4	0.5000	0	2	0	15.0000
4.0000	3.6250	1.5000	10.0000	5.3125	4.5000	0	0	0	6.1900	0.0600	0.8750	7.8800	8	45.00	4	0	0	25.0000
6.0000	3.9375	1.5000	12.5000	7.5625	6.6250	0	0	0	8.5000	0.0600	0.8750	10.6200	12	0	0	2	0	42.0000
8.0000	4.3750	1.6250	15.0000	9.6875	8.6250	0	0	0	10.6200	0.0600	1.0000	13.0000	12	0	0	2	0	67.0000
10.0000	4.6250	1.8750	17.5000	12.0000	10.7500	0	0	0	12.7500	0.0600	1.1250	15.2500	16	0.5000	0	2	0	91.0000
12.0000	5.1250	2.0000	20.5000	14.3750	12.7500	0	0	0	15.0000	0.0600	1.2500	17.7500	16	0.5000	0	2	0	138.0000
14.0000	5.6250	2.1250	23.0000	15.7500	14.0000	0	0	0	16.2500	0.0600	1.2500	20.2500	20	0.5000	0	2	0	186.0000
16.0000	5.7500	2.2500	25.5000	18.0000	16.0000	0	0	0	18.5000	0.0600	1.3750	22.5000	20	0.5000	0	2	0	246.0000
18.0000	6.2500	2.3750	28.0000	19.8750	18.0000	0	0	0	21.0000	0.0600	1.3750	24.7500	24	0.5000	0	2	0	305.0000
20.0000	6.3750	2.5000	30.5000	22.0000	20.0000	0	0	0	23.0000	0.0600	1.3750	27.0000	24	0.5000	0	2	0	378.0000
24.0000	6.6250	2.7500	36.0000	26.1250	24.0000	0	0	0	27.2500	0.0600	1.6250	32.0000	24	0.5000	0	2	0	545.0000



CADWorx Plant Tips and Tricks – Model Setup



Model organization is essential to beginning a new equipment model and a layout model. Think in advance how to set up models for each discipline that works toward one master model. Models should be set up as:

Model Types

- **Structural**: Skid structure, grating, handrails, ladders, and supports.
- **Piping**: Pipe, fittings, valves, control, valves, and inline instruments.
- **Equipment**: Pressure vessels, filters, exchangers, pumps, and more.
- **Electrical/Instrumentation**: Conduit, J-Boxes, Cable trays, and more.
- **Master**: Each model comes together in this overall model. This model should be used as your Main Layout page.

CADWorx Plant Tips and Tricks - Speed-up a Project



Using old models, designs to create new models:

- Use proven developed, existing models to build new models.
 - Convert the old model (if 2012 and older) to the new version(2013 and newer).
 - Make sure all models you use are correct and field corrected.
 - Be careful on changing valves and line sizes (2011).
 - Change out handwheels, prior to 2010, to use new handwheels.
 - Update to intelligent supports (2011).
 - Verify that the piping specs for the old project complies with the new model. (ANSI 150# system compare to a ANSI 600# system).
 - Verify that the design conditions from the old project complies with the new project. (Site designed for Colorado and new site in Florida).

CADWorx Plant Tips and Tricks

Speed up a project



Recheck all settings

- “Hideprecision”, “cmddia”, and “filedia” all should be set to (1) if you want a drawing to print clear with no contours.
- Check you viewport settings – viewport locked, viewstyle set to proper setting.
- All “dimscales” are set correctly.
- “Dimassociative” set to 2.

CADWorx Plant Tips and Tricks - Field



Information gathering in the field:

- Verify all information on existing drawings.
- Look for new construction or maintenance projects that you did not record.
- Sketch areas that are not on existing drawings.
- Take photos of new construction. (If your camera is not GIS equipped, use a drawing to log pictures taken.)
- Use a story board in your pictures to help you remember what you took pictures of. (Note tie-in locations, make notes of valve model, styles, and rating, and more.)
- Talk to the operators and plant personnel. They have the information on the underground piping.

CADWorx Plant Tips and Tricks - Pictures



Pictures are everything in the field. If you take a picture at more than one location, it is hard to remember what or where the picture was taken. There are (2) methods you can use to help. If your camera is a smart phone, find an application that allows you to place notes in the picture. (For iPhones, suggest My Measures and Theodolite).

Another method, is to use a whiteboard and make notes to place by the objects of importance. As seen here.



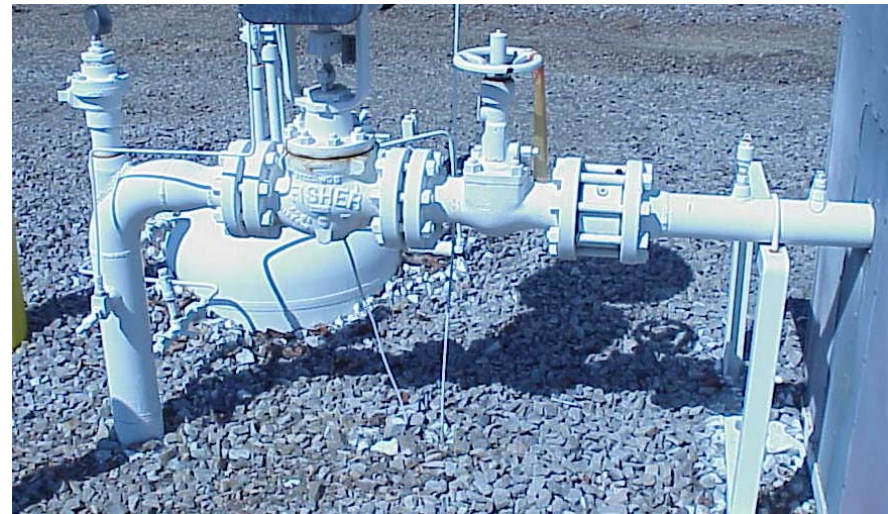
CADWorx Plant Tips and Tricks - Pictures



© Intergraph 2014

INTERGRAPH

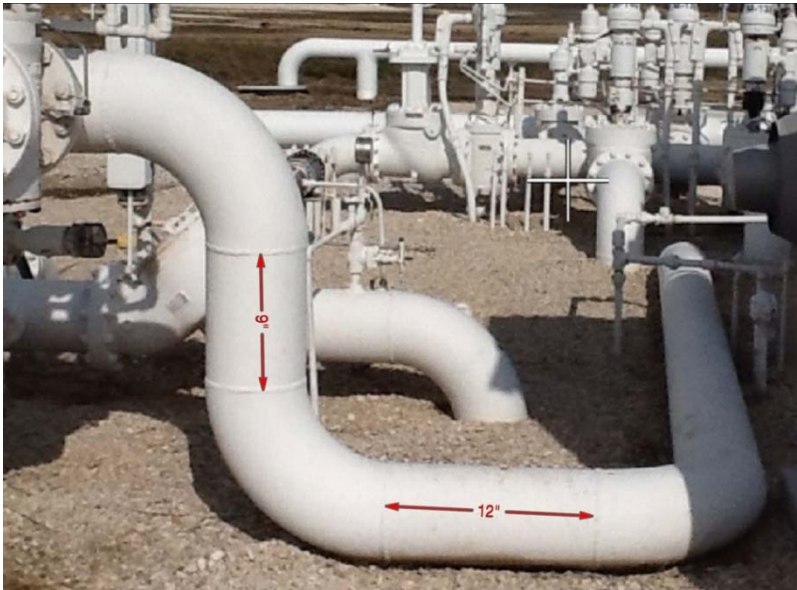
CADWorx Plant Tips and Tricks - Field



CADWorx Plant Tips and Tricks - Field



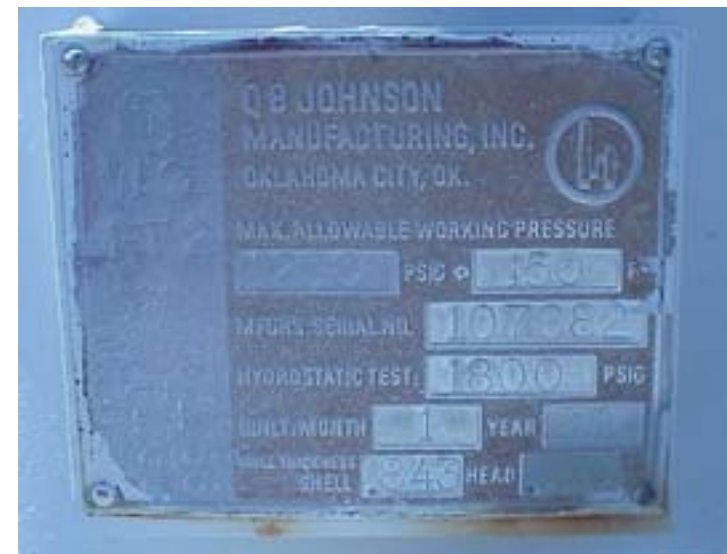
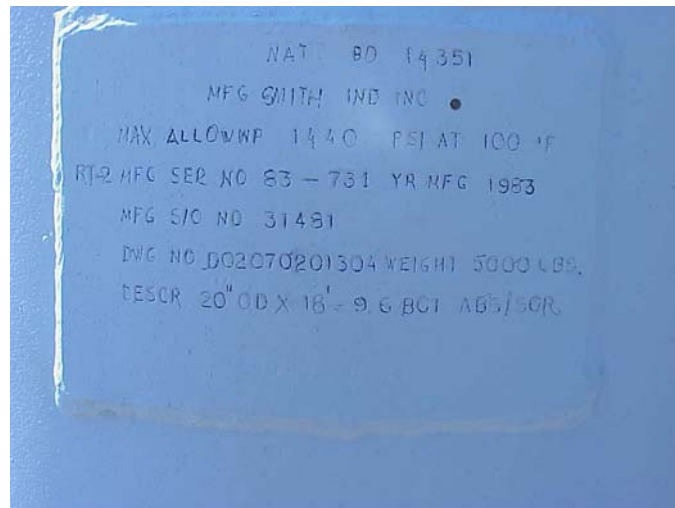
These photos edited with My Measure app



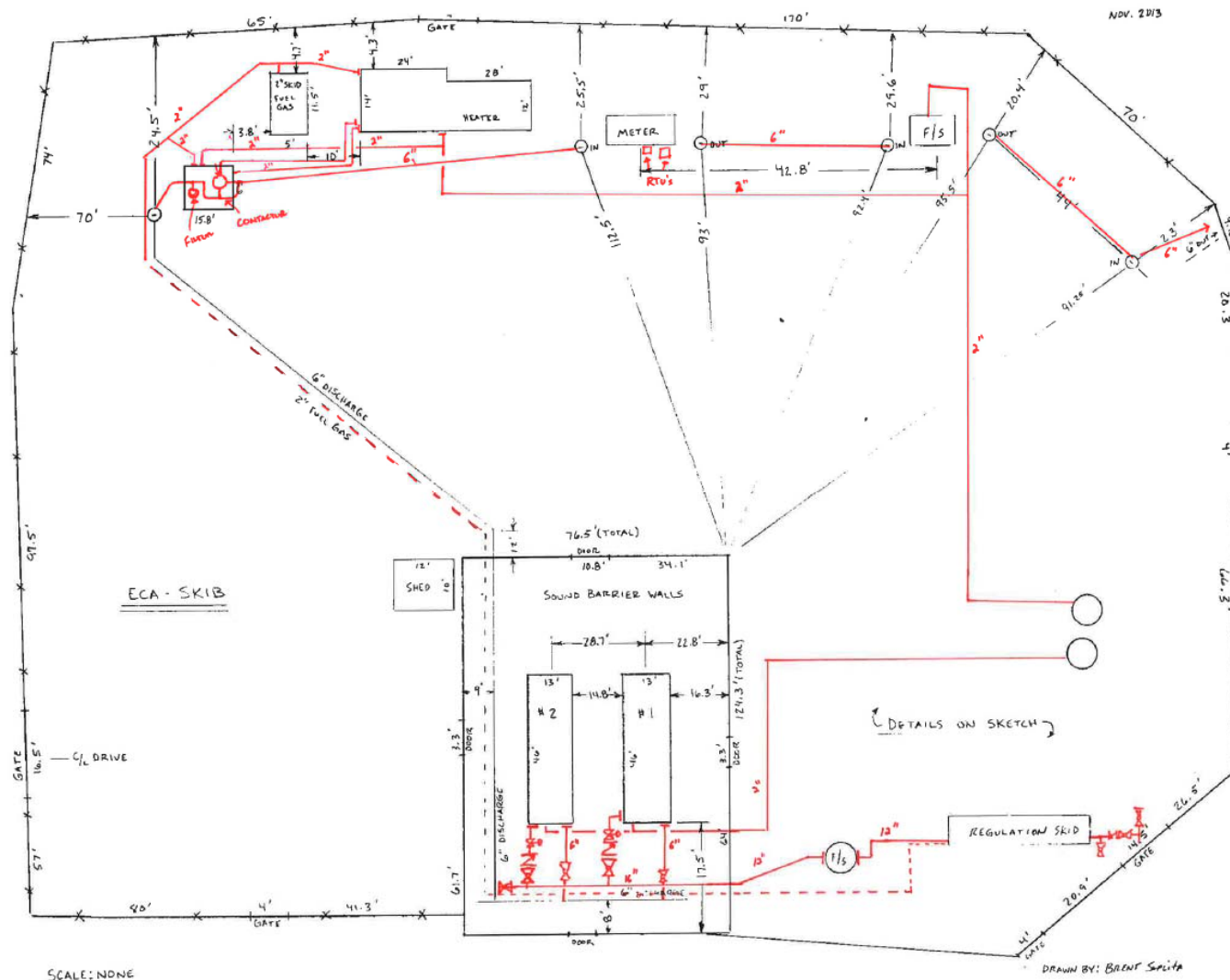
CADWorx Plant Tips and Tricks - Field



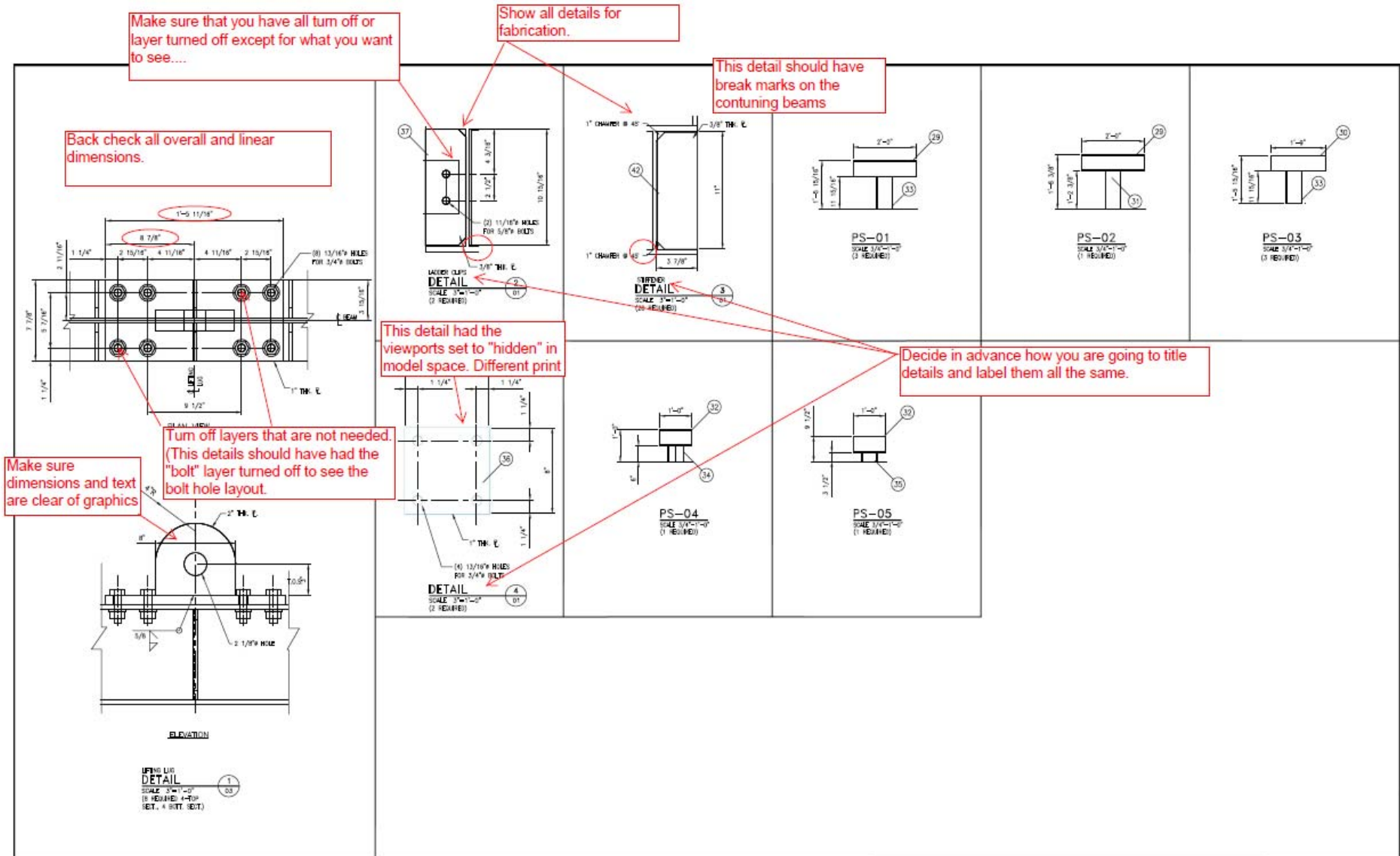
Gather as much information as you can off a vessel tag. Some can be hard to find. They could be painted over, so scratched that you cannot make out any information. Some have a company engraved plate (bottom right). Some just have a plate with engraved, stamped, or burned text. (bottom left)



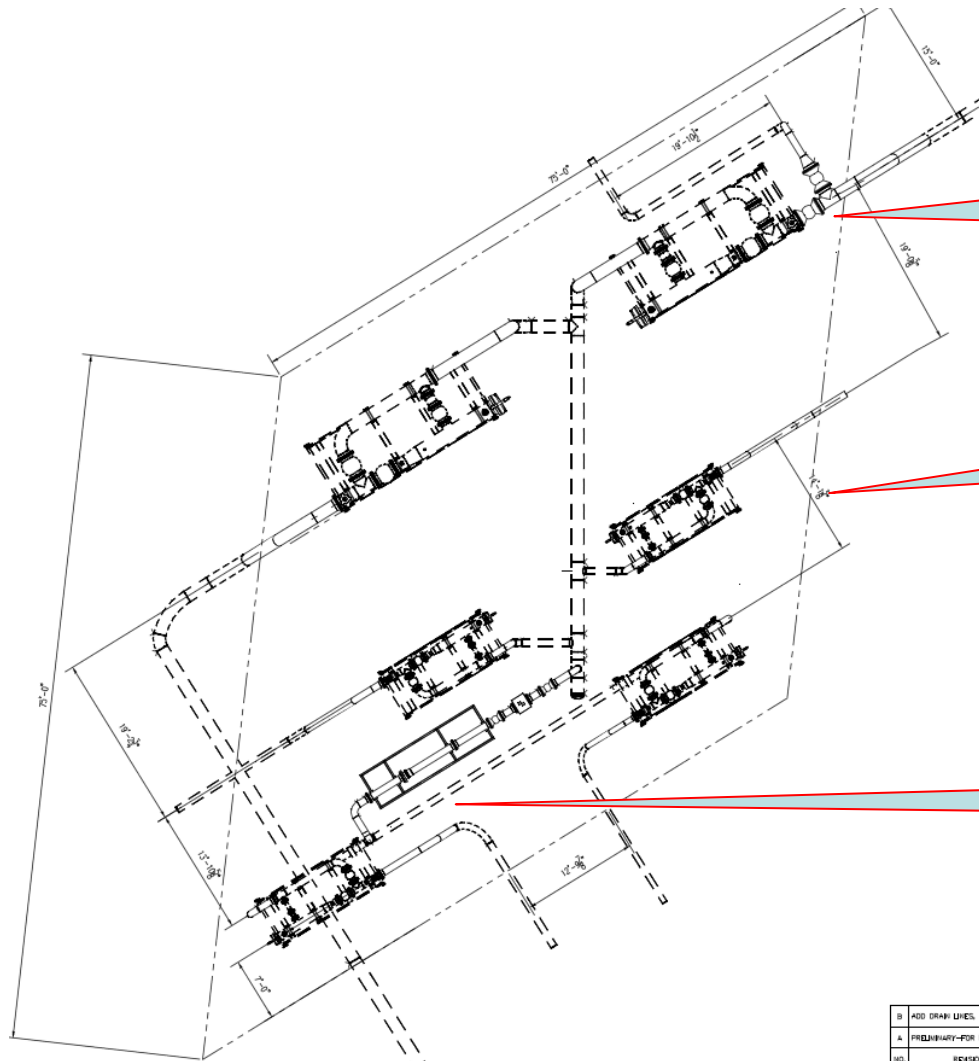
1. Make sure that all measurements are tied to 2 or 3 different base points and that the base points are well established.
2. Label everything.
3. Reference north.
4. Make sure all dimensions close before leaving the site. (The fence dimensions do not close in this sketch. Actually, they failed to tie the dimensions back to the start.)
5. Have additional sketches showing detail piping and elevations.
6. Show elevations from grade or established point.
7. Detail equipment. (At least show a rough sketch with height, supports, inlet, outlet, and other connections)



CADWorx Plant Tips and Tricks - Graphics



CADWorx Plant Tips and Tricks - Graphics



ABOVEGROUND
SOLID

DIMENSION
TEXT CLEAR OF
GRAPHICS

UNDERGROUND
HIDDEN OR DASHED

B	ADD DRAIN LINES RECORD
A	PRELIMINARY-FOR REVIEW O
NO.	REVISION

© Intergraph 2014

INTERGRAPH

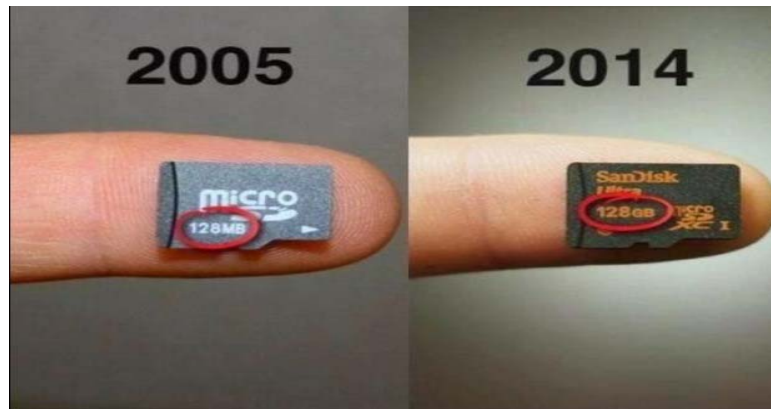
CADWorx Plant Tips and Tricks - Library



■ Keep an active library:

□ Use a USB drive (16 gig min) to store:

- Models of equipment (3D or 2D drawings from vendors).
- Catalogs.
- Standards.
- Notes and instructions.



versus



CADWorx Plant Tips and Tricks - Keyboard



How to make symbols with keyboard



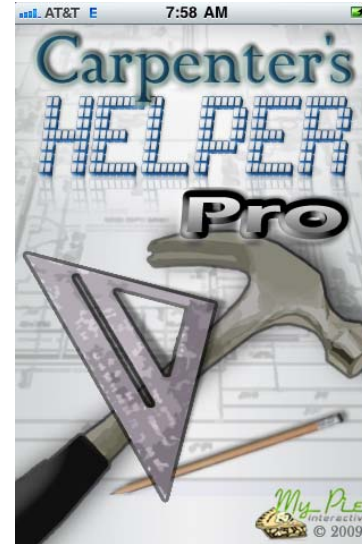
Alt + 0153 ™ ... trademark symbol	Alt + 6 ♠ ... spade
Alt + 0169 © ... copyright symbol	Alt + 5 ♣ ... Club
Alt + 0174 ® ... registered trademark symbol	Alt + 3 ♥ ... Heart
Alt + 0176 ° ... degree symbol	Alt + 4 ♦ ... Diamond
Alt + 0177 ± ... plus-or minus sign	Alt + 13 ♪ ... eighth note
Alt + 0182 ¶ ... paragraph mark	Alt + 14 ♫ ... beamed eighth note
Alt + 0190 ¾ ... fraction, three-fourths	Alt + 0721 ∑ ... Nary summation (auto sum)
Alt + 0215 × ... multiplication sign	Alt + 251 √ ... square root check mark
Alt + 0162 ¢ ... the cent sign	Alt + 8236 ∞ ... infinity
Alt + 0161 ¡ ... upside down exclamation point	Alt + 24 ↑ ... up arrow
Alt + 0191 ¿ ... upside down question mark	Alt + 25 ↓ ... down arrow
Alt + 1 ☺ ... smiley face	Alt + 26 → ... right arrow
Alt + 2 ☹ ... black smiley face	Alt + 27 ← ... left arrow
Alt + 15 ♀ ... female sign	Alt + 18 ↑ ... up/down arrow
Alt + 12 ♂ ... male sign	Alt + 29 ↔ ... left right arrow

CADWorx Plant Tips and Tricks - Apps

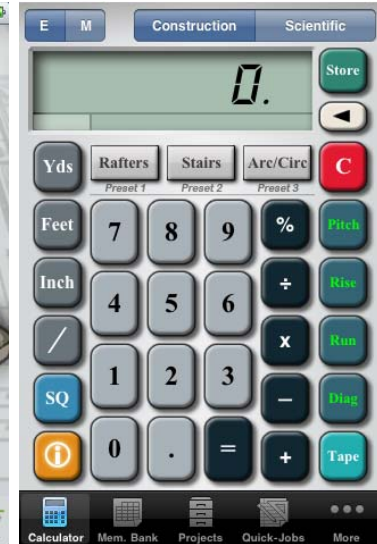
iPhone Applications



Calculated Industries
Construction Master Pro
Foot-inch – Trig -



My Pie
Carpenter's Helper
Foot-inch – Trig - Estimator



CADWorx Plant Tips and Tricks - Apps



iPhone Applications

Hunter
Theodolite
Adds GPS to camera



THEODOLITE

MAKER OF FINE ENGINEERING INSTRUMENTS SINCE 2008



Date & Time: Tue Feb 18 11:55:14 GST 2014
Position: 029.90092°N // 094.00529°W
Altitude: 0ft
Azimuth/Bearing: 280° N80W 4978mils (True)
Elevation Angle: -04.8°
Horizon Angle: +01.0°
Zoom: 1X
port arthur 12" lake charles capped

CADWorx Plant Tips and Tricks - Apps



iPhone Applications

MyScript

Calculator

Math calculations at you
finger tip



MyScript®
Calculator



CADWorx Plant Tips and Tricks - Apps



iPhone Applications

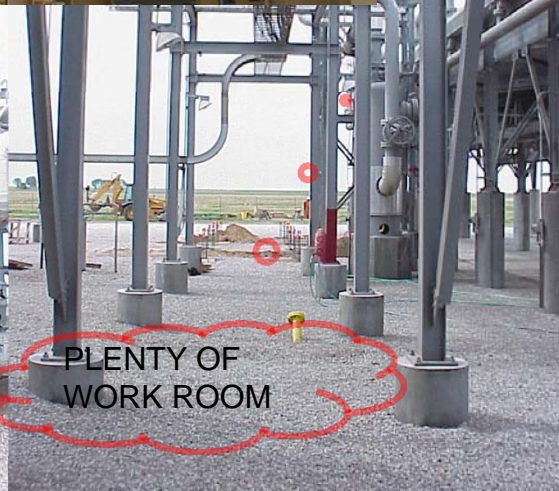
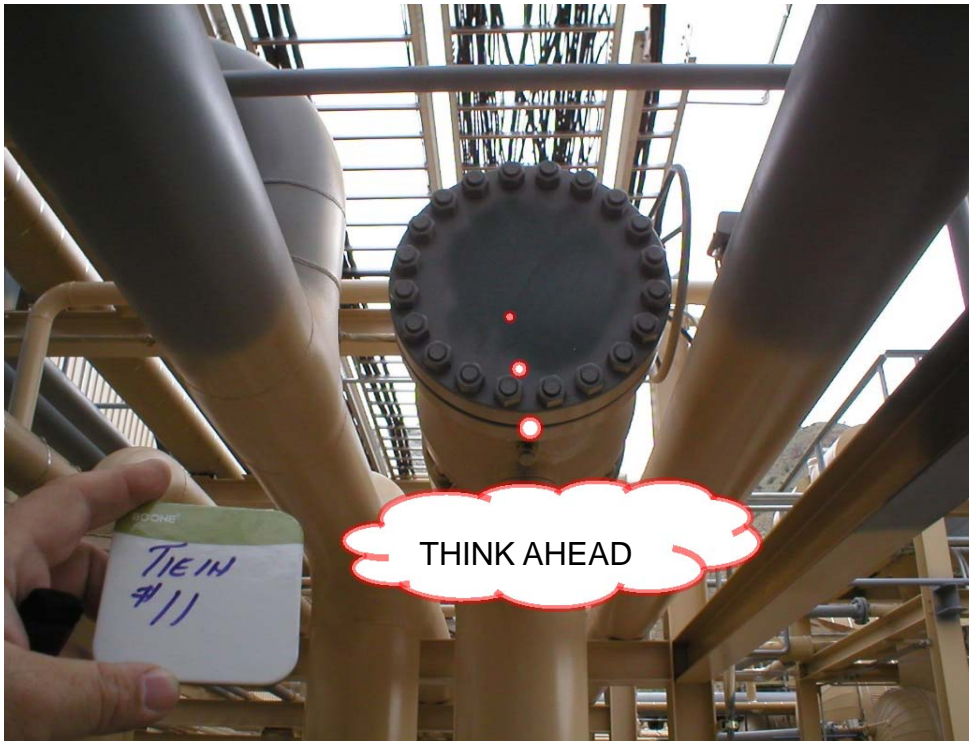
SYS Software App

My Measures Pro

Add dimensions and notes
to field pictures



Good Design



Design Gone Wild

ACCESS TO
ALL AREAS
AND VALVES

ACCESS TO
ALL AREAS
AND VALVES

ACCESS TO
ALL AREAS
AND VALVES





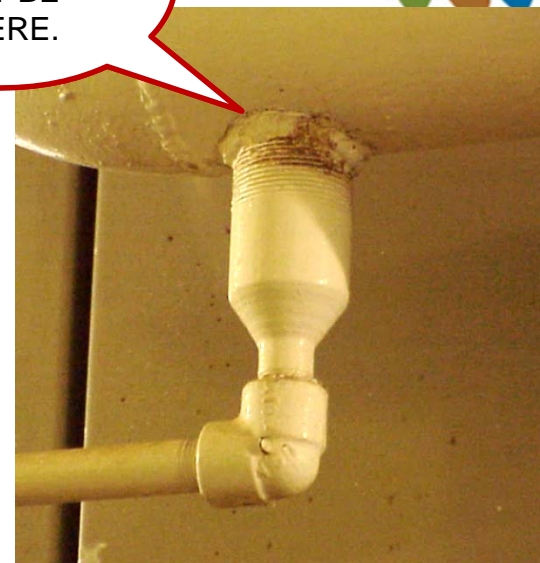
Design Gone Wild



Valves that are too close to grade to operate



LOOK AT SUPPORTS IN ADVANCE



WELDS THAT SHOULD NOT BE THERE.



NEED TO CLEAN UP FROM EQUIPMENT REMOVAL



HEADACHE

Design Gone Wild



Flow arrow
is usually
on filters



Filter turned
180 degrees
out and
installed.



Valves that
are too
close to
grade to
operate

CADWorx Plant Tips and Tricks - Website



Latest Info

Additions June 2012

Pipe Feb Tonnage Est Workbook has been updated in the tools section. - Thanks JOP

Additions May 2012

May 2012 Newsletter now out.

Additions March 2012

06 March 2012

Ring Type Joint Chart

Added to tools - Thanks 11echo

This site is run by pipers, for pipers, to provide THE home page for piping designers on the internet. We are dedicated to bringing the best in current piping knowledge to piping professionals worldwide.

Autodesk® Plant Design Suite

Try it Now >

So ... What's on pipingdesigners.com?

A problem shared is a problem halved, and we intend to carry that notion further, through the use of forums where pipers of all levels can ask their questions and find their answers.

Piping Jobs! Piping Jobs! Piping Jobs!

SIGN UP TO THE PIPING DESIGNERS JOB BOARD

Training modules are provided to help young designers along, and also to refresh the memory of senior designers.

Our tool box is an ever-expanding library of information, spread sheets and cut sheets.

We are dedicated to providing up to date job information and positions around the globe on our jobs page. We have links to [piping standards](#), [useful tips](#), [company information](#) and various other topics.

pipingdesigners.com

pipingdesigners Job Alert

Lead Design Engineer - Piping divr.it/1w6KQg RT to #Pipers

3 days ago · reply · retweet · favorite

pipingdesigners Job Alert

Engineering Systems Senior Coordinator I - EC69240 divr.it/1vRWrd RT to #Pipers

5 days ago · reply · retweet · favorite

pipingdesigners Job Alert

Process Designer divr.it/1vNt93 RT to #Pipers

5 days ago · reply · retweet · favorite

pipingdesigners Job Alert

Piping Designers 2-D AutoCAD divr.it/1vLbnj RT to #Pipers

5 days ago · reply · retweet · favorite



Anton Dooley – Site owner and manager of Piping designers.com
Excellent for training, tips, and job notification.

pipingdesigners.com

Home Jobs Training Tips Tools Links Standards Forum About

Search

3D Piping For Oil & Gas

provid.com/3D-Piping-Software

3D Piping Software For EPCs & OOs. Get A Demo & Download A Free Trial

Autodesk®

tools of the trade

Section I
Leadership & Supervision Tools

Section II
CAD Tools

Section III
Calculators

Section IV
Codes & Standards

Section V
Equipment Tools

Section VI
Piping Fittings

Section VII
Flanges

Section VIII
General Tools

Section IX
Pipes & Piping Tools

Section X
Valves

Disclaimer

This information is provided "as is" and pipingdesigners.com makes no warranty of any kind with respect to the subject matter or accuracy of the information contained herein. pipingdesigners.com specifically disclaims all warranties, expressed, implied or otherwise, including without limitation, all warranties of merchantability and fitness for a particular purpose. In no event shall pipingdesigners.com be liable for any special, incidental, indirect or consequential damages of any kind or any damages whatsoever resulting from loss of use, data, profits, whether or not advised of the possibility of damage, and on any theory of liability, arising out of or in connection with the use of the information contained herein. This publication may include technical inaccuracies or typographical errors. Changes may be periodically made to the information herein.

pipingdesigners.com