

Recently a customer raised an issue around needing to annotate the elevation of pipe in plan view on his orthographic drawings. A big issue, since entering the text manually would be too time consuming, particularly in light of looming deadlines. While it wasn't too difficult to get the elevation annotation to show in decimal inches, getting it formatted to read feet-inches was a challenge.

Enter Dag Austrheim, my esteemed colleague from Norway. He created 3 annotations Top of Pipe, Bottom of Pipe and Elevation – all formatted to show feet-inches properly.

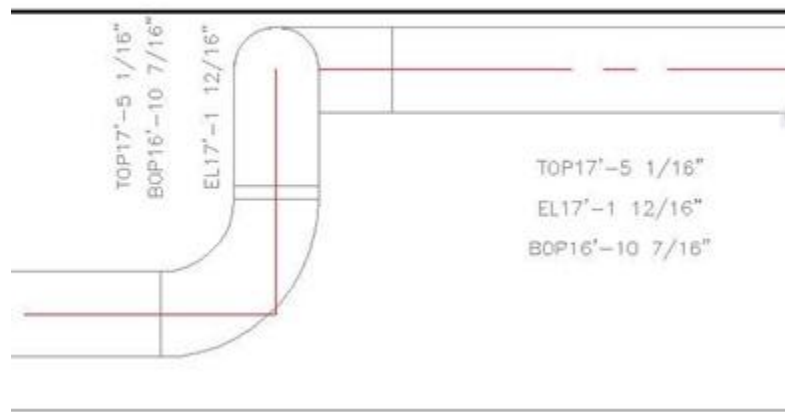
(I'm sure the whole time he was figuring this out he was shaking his head as to why we don't just adopt the metric system.)

Below, his notes on how to implement this, including his screen grab of what the annotations will look like when finished.



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This is the outcome on the Ortho:



This is the triggers you need to add to your Project. (To Piping.Dcf -> EngineeringItems.)

You need to do following:

- Add new properties field TOP, COP and TOP to “Piping and Equipment” Class
- Add new annotation for your TOP,COP and BOP under “Pipe Run Component” Class
- Type your TOP, EL or BOP in front of the properties(see below).



If you don't have SQLiteexpert, then select the link below to download.

<http://www.sqliteexpert.com/>

- Open your Piping.dcf (select fileformat \*.\* ) with SQLiteexpert and select EngineeringItems table.
- Then select DesigTab, Triggers and "ADD".

You need 2 new triggers – one for Insert (new Component) and Update(edit component)

As you see in Yellow, this is for AFTER INSERT.

- Create a trigger, named *ELInsert* and copy the code below.
- Create a new trigger, named *ELupdate* and copy the same, but set the trigger from **AFTER INSERT** to **AFTER UPDATE**

**Note.. You need to save your 3D model, before the trigger will save the info to COP etc.**

*CREATE TRIGGER [ELInsert]*

***AFTER INSERT***

*ON EngineeringItems*

*BEGIN*

*UPDATE EngineeringItems*

*SET TOP = CAST((new."Position Z"+MatchingPipeOD/2)/12 as INT) || "'-'*

*// CAST(12\*((new."Position Z"+MatchingPipeOD/2)/12-CAST((new."Position Z"+MatchingPipeOD/2)/12 as INT)) as INT)||' '*

*// CAST(16\*(12\*((new."Position Z"+MatchingPipeOD/2)/12-CAST((new."Position Z"+MatchingPipeOD/2)/12 as INT)))*

*-CAST(12\*((new."Position Z"+MatchingPipeOD/2)/12-CAST((new."Position Z"+MatchingPipeOD/2)/12 as INT)) as INT)) as INT)||'/16"*

*WHERE PNPID=new.PNPID;*

*UPDATE EngineeringItems*

*SET COP = CAST(new."Position Z"/12 as INT) || "'-'*

*// CAST(12\*(new."Position Z"/12-CAST(new."Position Z"/12 as INT)) as INT)||' '*

*// CAST(16\*(12\*(new."Position Z"/12-CAST(new."Position Z"/12 as INT))*

*-CAST(12\*(new."Position Z"/12-CAST(new."Position Z"/12 as INT)) as INT)) as INT)||'/16"*

*WHERE PNPID=new.PNPID;*

*UPDATE EngineeringItems*

*SET BOP = CAST((new."Position Z"-MatchingPipeOD/2)/12 as INT) || "'-'*

*// CAST(12\*((new."Position Z"-MatchingPipeOD/2)/12-CAST((new."Position Z"-MatchingPipeOD/2)/12 as INT)) as INT)||' '*

*// CAST(16\*(12\*((new."Position Z"-MatchingPipeOD/2)/12-CAST((new."Position Z"-MatchingPipeOD/2)/12 as INT))*

*-CAST(12\*((new."Position Z"-MatchingPipeOD/2)/12-CAST((new."Position Z"-MatchingPipeOD/2)/12 as INT)) as INT)) as INT)||'/16"*

*WHERE PNPID=new.PNPID;*

*END*

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