CAD RULES_REV_1

LAZYTURN IMPORT OF DXF FILES - CAD DRAWING ERRORS
(ORIGINAL POST #474)

1. A vertical line going up or down at the end of the profile is accepted but not required.

2. Additional elements ie; multiple lines / one drawn under the other will cause an error " self intersection in master file" and no rendered graphics will be displayed.

3. Lines vertical or parallel not connected to the profile (even as close as .0001") are ignored.

4. A vertical line touching the profile will cause part of the profile to be ignored. The part ignored is to the right of the line. If the line doesn’t touch the profile then the line is ignored.

5. Two vertical lines touching the profile will cause rejection of profile to the left of the lines and acceptance of the profile to the right of the two lines. I didn't check to see what happens as the gap between the two vertical lines is increased to some value.
6. A break in the profile continuity on a straight horizontal line from .001" to about .11" still provides for a rendered image. With the break exceeding .11" to .2" it acts as a break in the profile and the left side of the profile is accepted / is the beginning of the rendered profile.

7. Space between intersecting circles .001" to .1" still allows for a rendered graphic but a horizontal line is created to complete the profile. Greater than .1" and the left side of the profile is created as if it was the start of the profile at zero.
8. LazyTurn will reject lines in the lower half of the profile (similar to 3 above) including lines drawn through the profile, but, no negative y values are allowed, and if they exist you will get an error message telling you so.

9. When partial circles (arcs not touching / terminating at a common tangent point) overlap, the amount of overlap modifies the profile similar to #7 above. Starting at a overlap tail of approx .050" only a partial rendered profile will be produced. Note that #7 to #9 are for circles which would follow some basic shape formula, thus a continuous profile can be generated. This may not be the case for a non basic shape / non generic math formula.

10. Any rough profile must be possible with the first pass being a full length cut. Stock must be set large enough in diameter to allow this. To see what I mean, use the Diags checkbox in the

rough generator to see the diagnostic lines, note how the first pass is broken. Increase the diameter enough that the first pass is a solid line. This one is the result of an unwritten rule (post #622)

11. The termination of the profile at the LEFT (Z-) end of the drawing MUST extend, in the -z direction, BEYOND any other entity in the drawing. If the profile ends with a downward arc, the end of the line must NOT go beyond a line tangent to that arc, and perpendicular to the center line of the part.

ORIGINAL POST #474