G2FABSOFT

Date: 01.02.2021

Common Cut – General Procedure

Introduction

This document describes general procedure for sharing a common cut between two straight lines which are separated by a distance that is exactly equal to the toolsize (diameter of the cutting beam), in oder to reduce reducing time and consumable cost.

Procedure

1. Create a new job as usual. Select material and thickness. Note down the **Toolsize** for that material and thickness. However, do **NOT** enable leadin / leadout while creating a new job, because they may prevent common cut formation in some cases.
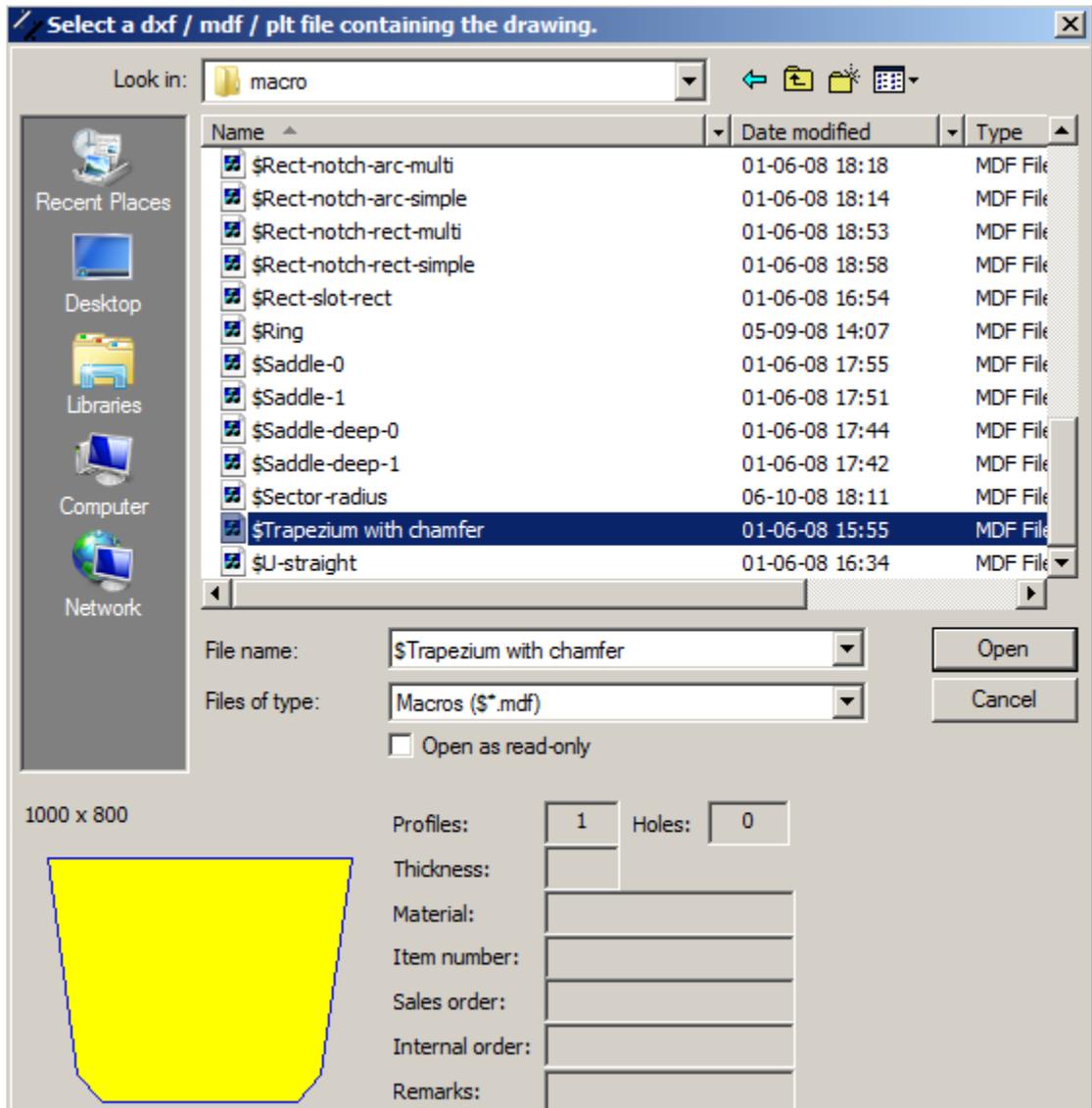

2. Select the following two part drawing files from **C:\g0xin\macros** for nesting. (You will find them towards the end of the alphabetically sorted list of macros in that folder.)
   * $ Trapezium with chamfer
    * $ U-straight

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Select a dxf / mdf / plt file containing the drawing.

Look in: macro

Name	Date modified	Type
$Rect-notch-arc-multi	01-06-08 18:18	MDF File
$Rect-notch-arc-simple	01-06-08 18:14	MDF File
$Rect-notch-rect-multi	01-06-08 18:53	MDF File
$Rect-notch-rect-simple	01-06-08 18:58	MDF File
$Rect-slot-rect	01-06-08 16:54	MDF File
$Ring	05-09-08 14:07	MDF File
$Saddle-0	01-06-08 17:55	MDF File
$Saddle-1	01-06-08 17:51	MDF File
$Saddle-deep-0	01-06-08 17:44	MDF File
$Saddle-deep-1	01-06-08 17:42	MDF File
$Sector-radius	06-10-08 18:11	MDF File
$Trapezium with chamfer	01-06-08 15:55	MDF File
$U-straight	01-06-08 16:34	MDF File

File name: $Trapezium with chamfer — Open

Files of type: Macros ($*.mdf) — Cancel

☐ Open as read-only

1000 x 800

Profiles: 1   Holes: 0

Thickness:

Material:
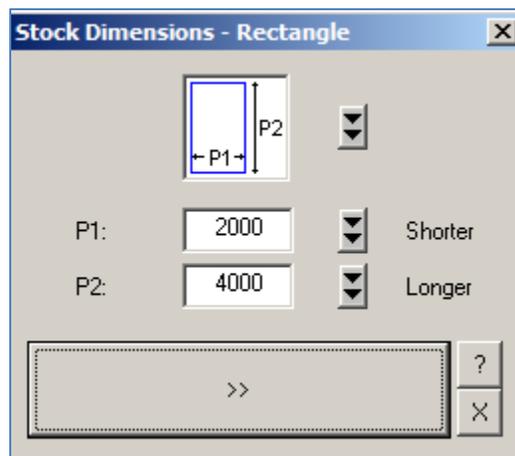
Item number:

Sales order:

Internal order:

Remarks:

3. The software will ask you to specify the dimensions of each part, one by one. Do not change the dimensions, but specify **Quantity = 2** for for both the above mentioned parts.
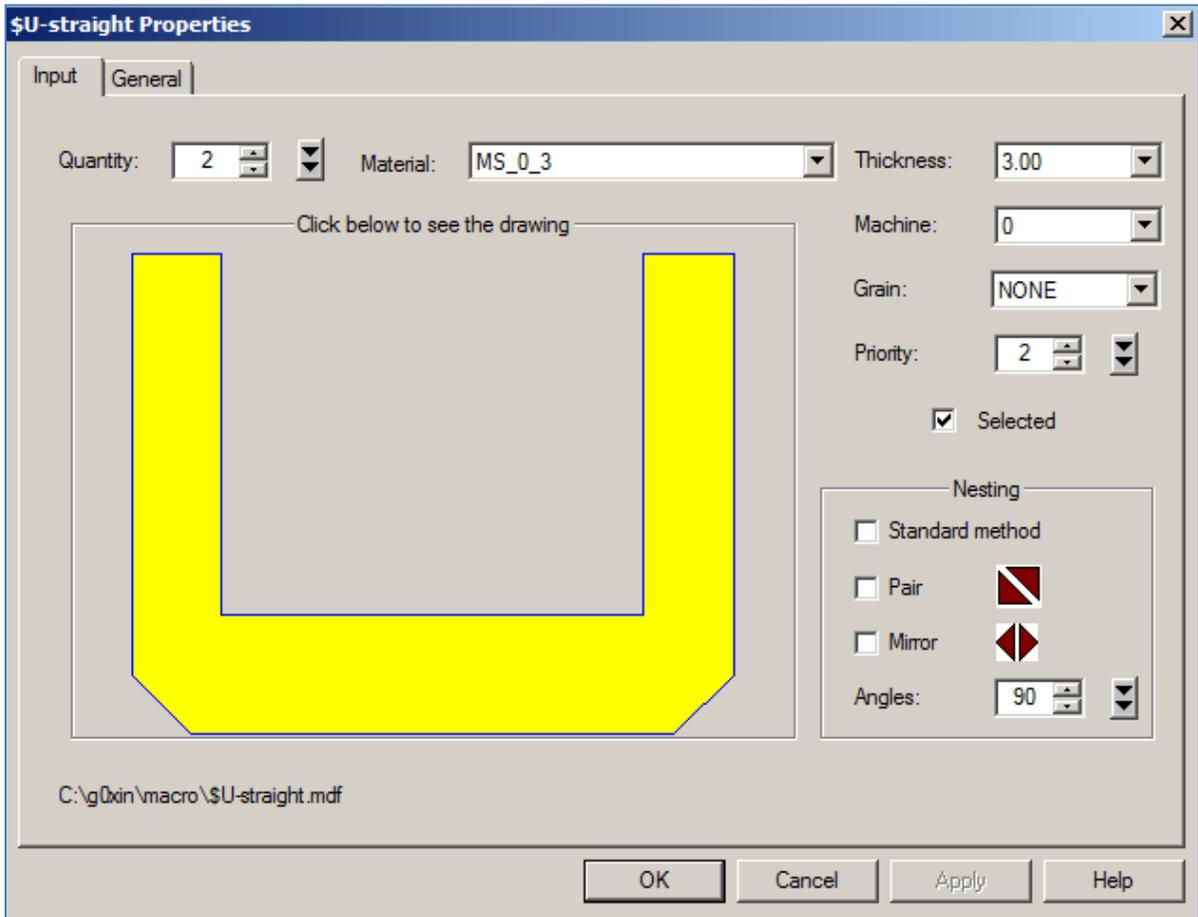
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4. Proceed further as usual till the software asks you to specify the size of the raw material. Here, select the size of **2000 x 4000** mm.

5. Next, the software will nest the parts automatically. Depending on the parameters set in your software license, you will see one of the following two types of layouts on your screen. Let us understand the process of defining common cut using a nested drawing of the **first type**. (The operations remain the same for the other type of layout also and hence, it is not necessary to explain it separately in this document.)
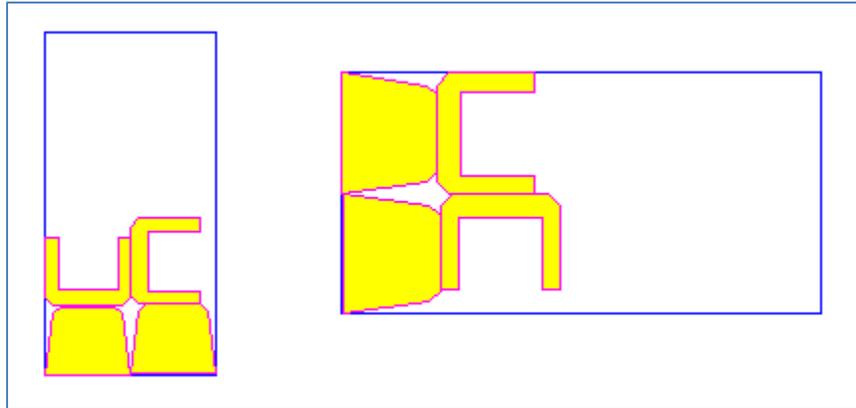

6. In order to view the common cut easily, let us disable most of the viewing options from the toolbar on the left side of your screen, except the two buttons viz. **Show cutting plan** and **Show common cuts**. (Disable text also, if necessary.)
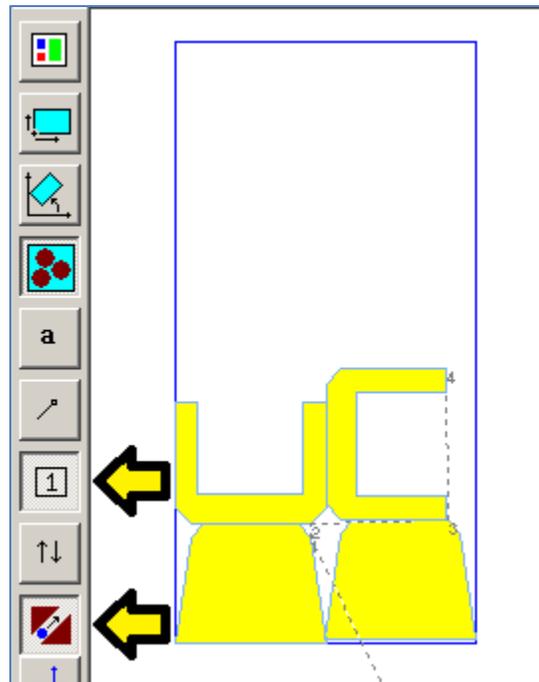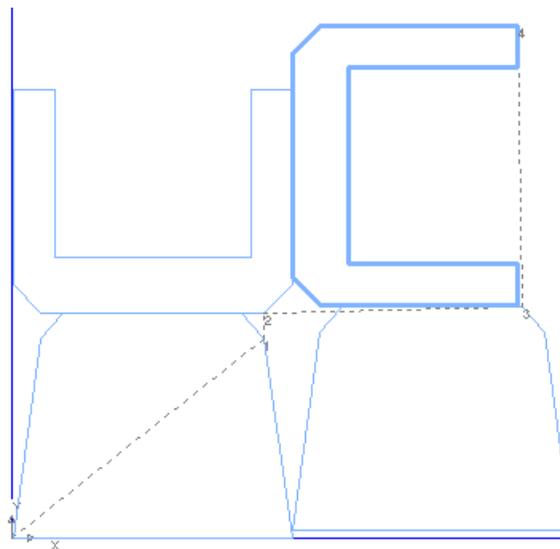

7. Select the menu **Fit >> Fitter ++ >> Find Common Cut @ Down**. Select **NO** in the next window to generate common cuts automatically. You will be able to see the common cuts formed between the two parts automatically, at multiple locations, as shown below.
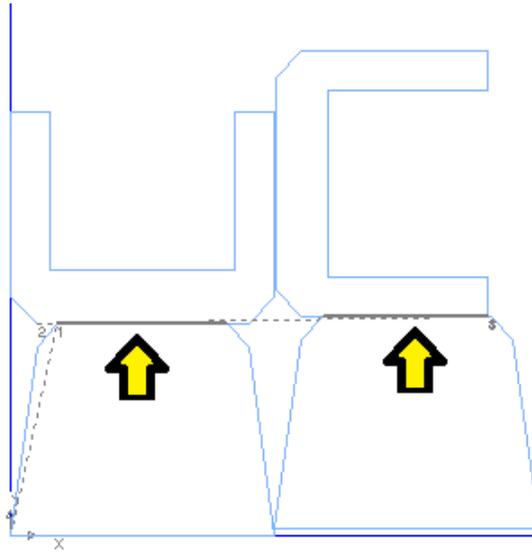
8. Select the menu **Edit >> Undo** to remove the first common cut. Then, select the menu **Edit >> Undo** once again to remove the second common cut. (Note, a separate **UNDO** is required to remove each common cut, generated automatically.)
9. Now, let us generate common cut manually. Select the **U-shaped piece** that is on the **TOP - RIGHT** corner, with mouse. We shall move this piece to the left in order to create a common cut. (Do not select any other piece. Just select that piece which you want to move.)


10. Select the menu **Fit >> Fitter ++ >> Find Common Cut @ Left**. This time, select **YES** in the next window to generate a common cut manually. And then select the line that should be moved towards left side, to create the common edge. (If the two common lines are very close to each
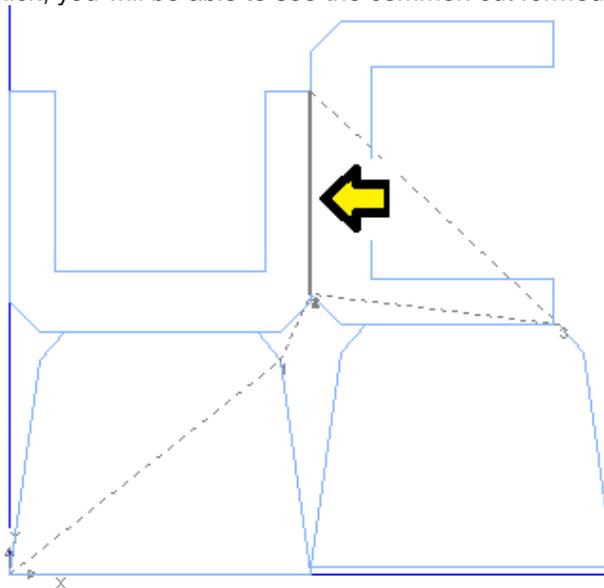
other, it may be difficult to select that line which you want to move. In that case, click a little bit on the right side of the correct line that has to be moved, as shown below.)
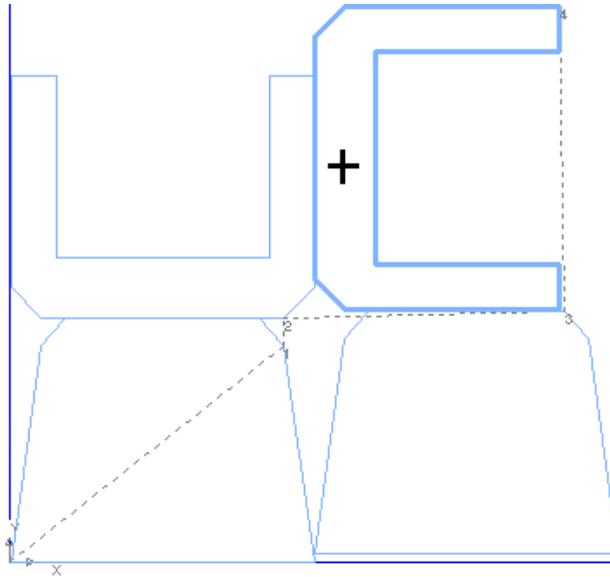

11. As soon as you click, you will be able to see the common cut formed between the two pieces.

12. Now, let us move both the U-shaped nested pieces down together to get two more common cuts. For that, first select the two U-shaped pieces with the mouse which you want to move down. Then, select menu **Fit >> Fitter ++ >> Find Common Cut @ Down** and select **YES** in the next window to generate common cuts manually. Finally, click just above the line which would like to move down.
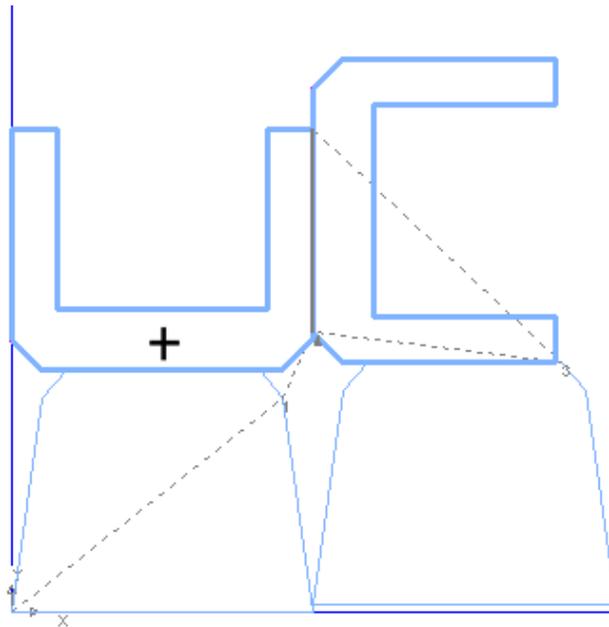
13. At the end of this operation, you will be able to see total 3 common lines in the layout. Note, all the selected pieces (that is, both the U-shaped pieces which you selected earlier) moved down by the same distance, in order to create two separate common cuts.
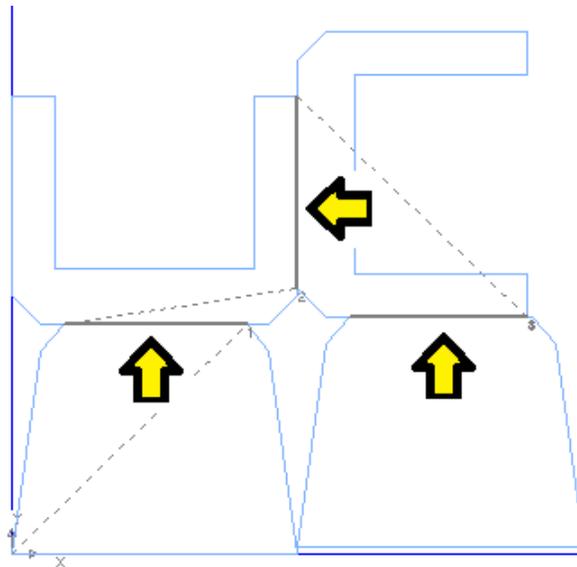

14. Similarly, you may use other options under the menu **Fit >> Fitter ++**, in order to create common cuts in other directions.
15. Now, let us create L**eadin Clipper** for each common cut. (Note, clippers must be created only after completing all the nesting, sequencing and leadin-leadout related operations. That is

because a clipper does not belong to any nested piece and works independently. If the relationship between the nested piece and the leadin clipper is altered subsequently, it may result in incorrect cutting plan.)

16. Select the menu **Contour >> Clipper ++ >> Leadin clipper**. Select **YES** in the next window in order to run this operation automatically.
17. Now, zoom in the appropriate location and see the cutting plan at the **START** point of each common cut. You will be able to notice a clipper there. (Note, the **START** point of the common cut may be at the other end too, depending on whether you are cutting the selected contours clockwise or anti-clockwise. So, if you do not find clipper at one end, check the other end.)
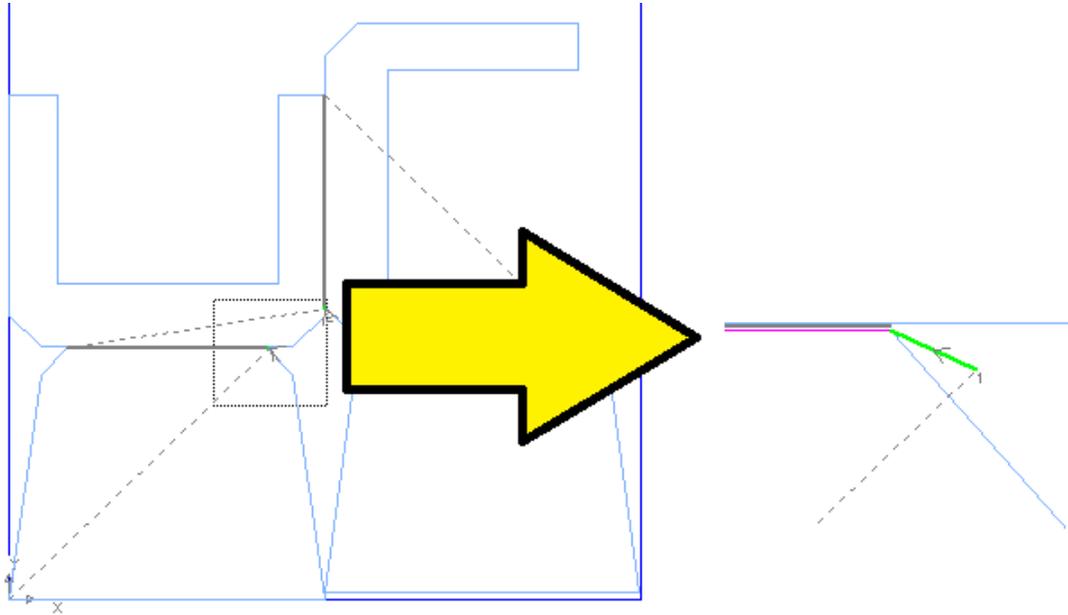
18. If you want, you can check the properties of a clipper using the menu **Contour >> Clipper Properties**. (However, do not modify the properties if you are not sure.)
19. Now, let us add these clipper lines manually.
20. First, remove the old clippers by selecting the menu **Edit >> Undo**.
21. Then, select the menu **Contour >> Clipper ++ >> Leadin clipper**. This time, select **NO** in the next window in order to run this operation manually.
    a. Now, click on the **START** point of the **incomplete** cycle in a common cut. (Note, as described earlier, the **START** point of a common cut can also be at the other end of the line, depending on whether you cut clockwise or anti-clockwise.)
    b. The point selected in preceding step is the location where the leadin clipper meets the parent drawing. Now, you must click on a point in the **SCRAP** area, so that the software can begin the leadin clipper from this point.
    c. Repeat previous 2 steps for each cutting cycle in the nested layout.
    d. Press the **ESCAPE** to stop the process.
22. Check all the leadin clippers, as described earlier.
23. To learn about the extensions as well as limitations of this feature, please refer to the manual and other documentation associated with the software.