



USER MANUAL

PLPak Version 1.01

**STRUCTURAL ANALYSIS SOFTWARE USING BOUNDARY ELEMENTS
METHOD**

PLPAK basic tutorials

Tutorial 8 – More PLPost

CONTACT DETAILS:

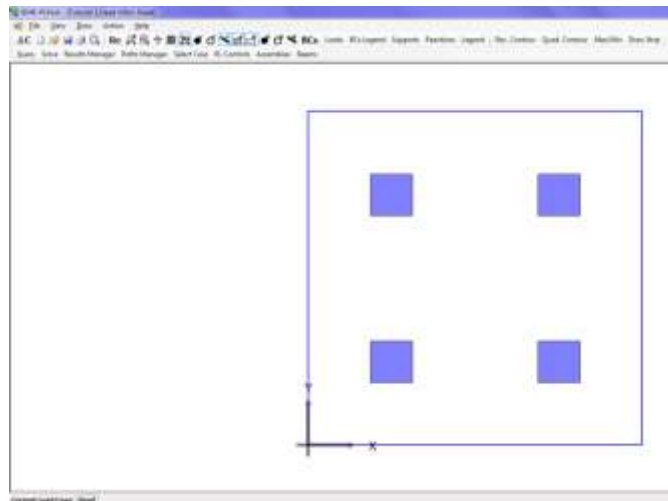
www.be4e.com

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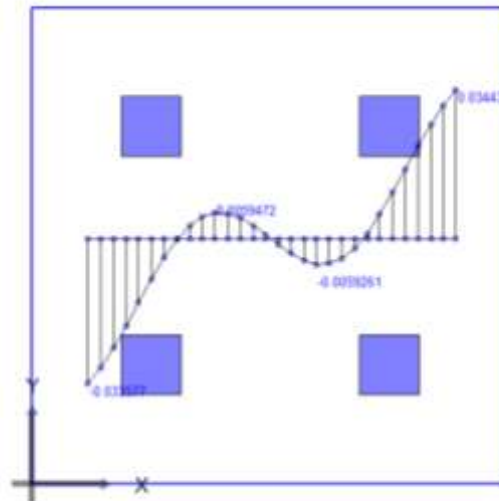
Tutorial 8

The objective of this tutorial is to go further in understanding and manipulating the results shown in PLPost.

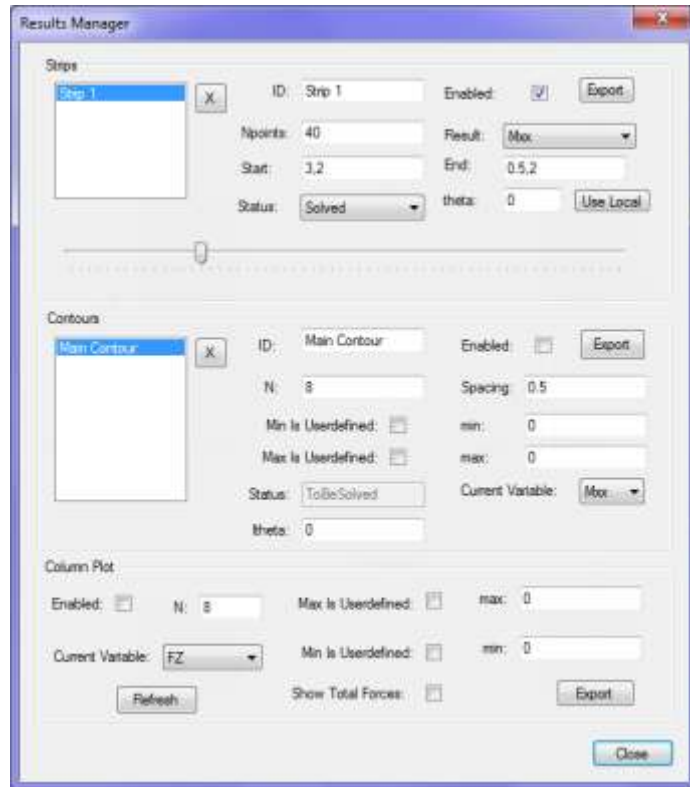
I – Open in PLPost the .LC file created in tutorial 2.



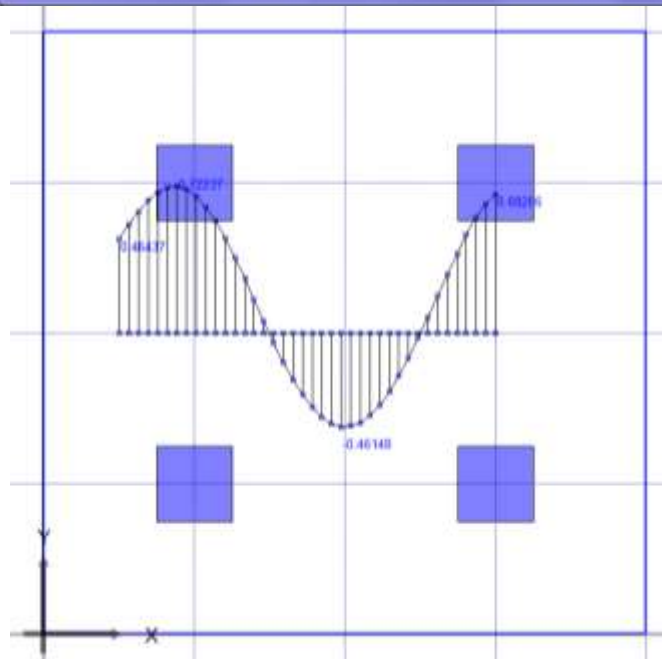
II – Draw a strip across the slab, select draw a strip and then click and drag to draw the strip. After you draw the strip, click on solve to solve the strip, it should solve successfully.



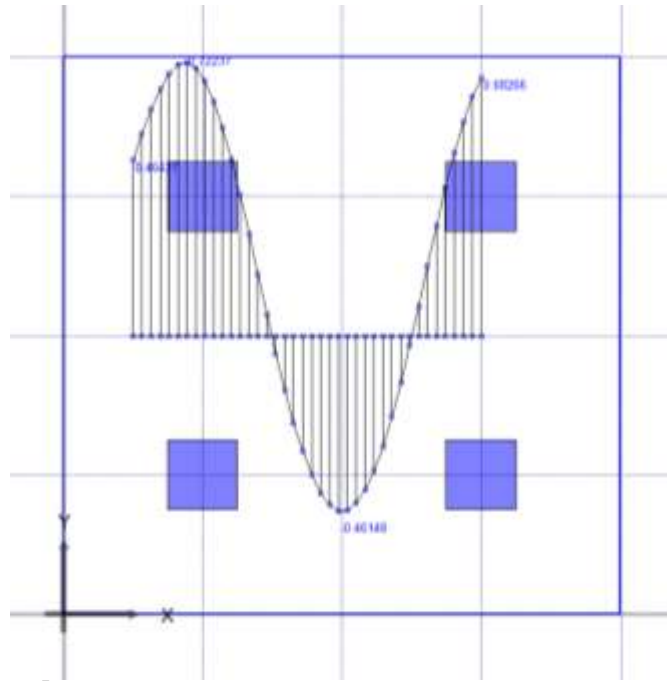
III – As mentioned before through the Results Manager the strips can be enabled or disabled as well as renamed. The start and end points of the strip can be modified as well. The number of points can be increased along the strip to provide a more accurate presentation of the curve. Here the number of points will increase to 40 and the start point and end point will be (3, 2) and (0.5, 2) respectively and let it show the moment M_{xx} .



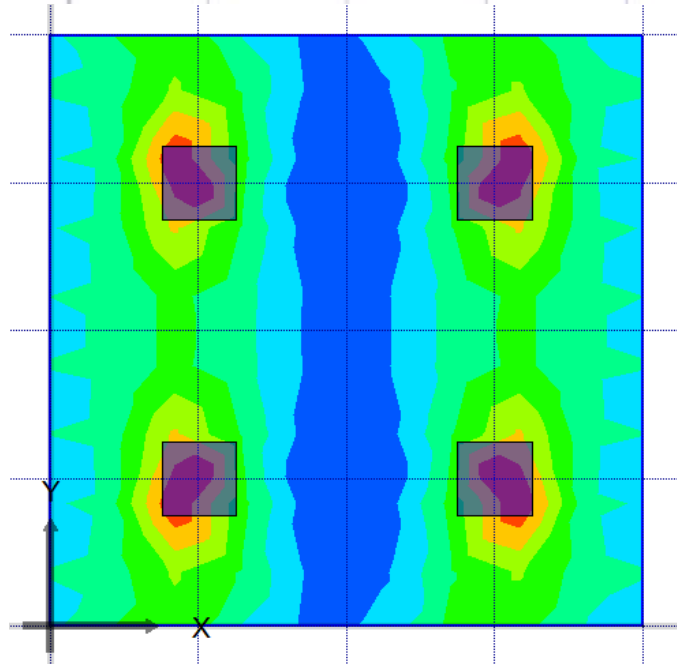
IV – The plot becomes as shown.



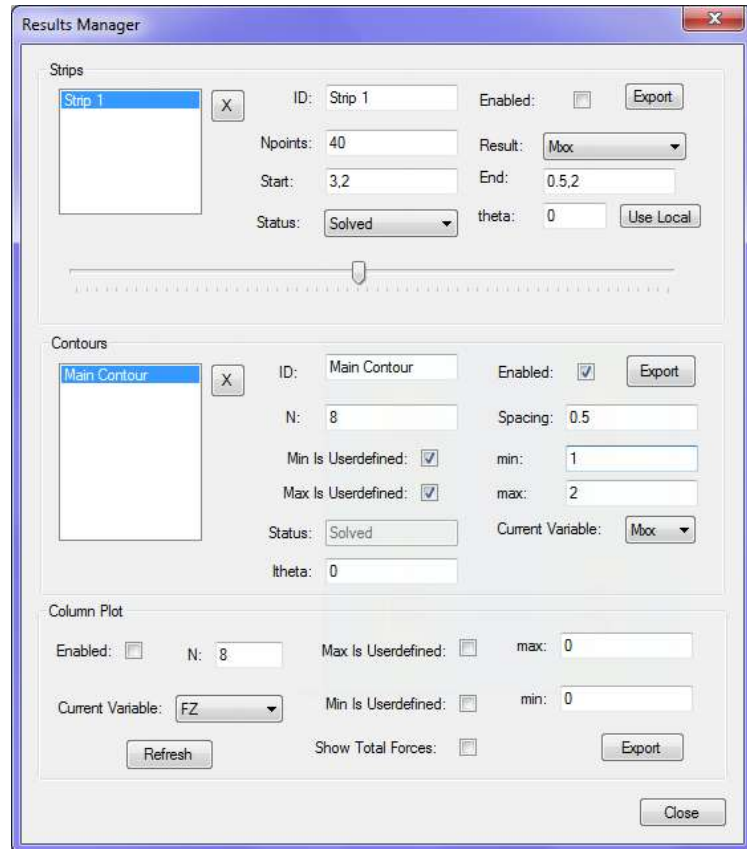
V – Change the scale on the slider to almost half way through the bar this helps when coming to deal with several strips on different surfaces. The plot changes as shown.



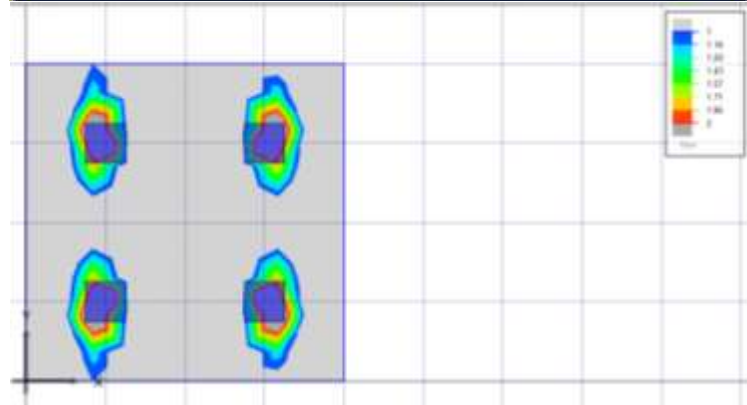
VI – Enable the Main contour from the Results Manager by ticking on the Enable box and let it display the M_{xx} then close. Click Solve and refresh. The plot appears as shown.



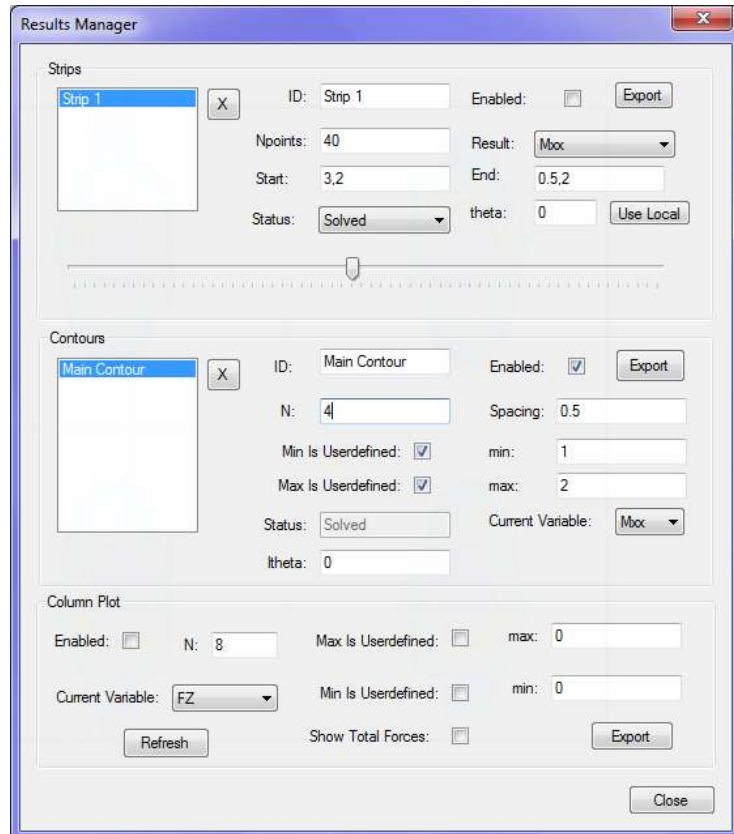
VII – From the Results Manager change the min and max values of the contours to, for example, 1 and 2 and tick on Userdefined.



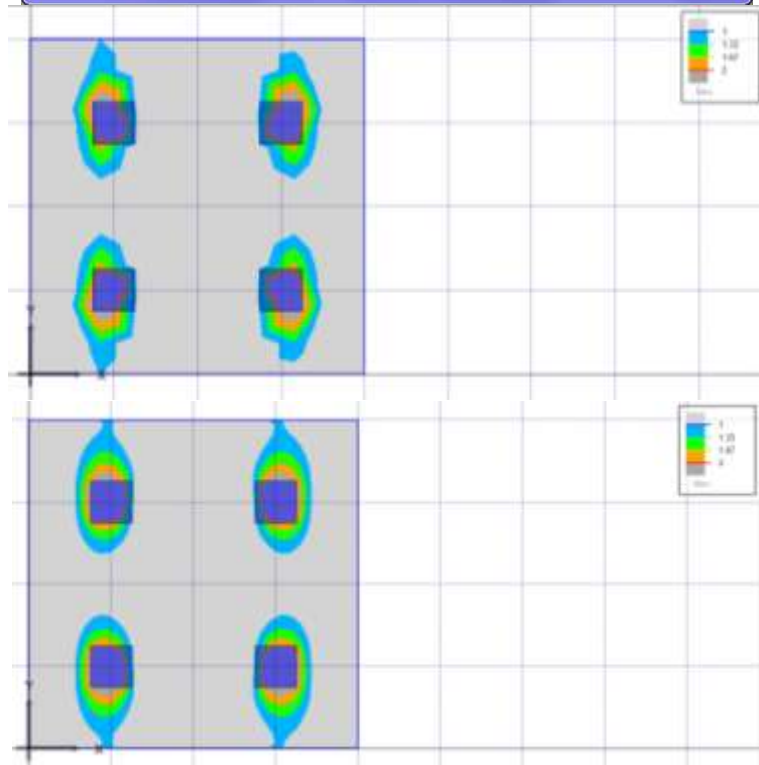
VIII – Enable the Legend and refresh to appreciate the difference. The plot becomes as shown. Notice that the legend indicates 1 as the min. And 2 as the max.



IX – It is obvious that the range is too large that is the colours representing the contours are a lot .So open Results Manager and specify less number of colours ‘ N’, for example, the default 8 will change to 4 . Close the dialogue box and refresh



X - Notice that the legend and the contour map now only have four colours.



XI - Spacing under contours in the results manager controls the distance between the points that will be solved in the model. If you decrease the space, you will increase the accuracy and at the same time it will take longer to solve the model. Here the spacing will be 0.1 instead of 0.5. Click solve and as shown the contours now are much smoother and accurate.