

To make the stress-strain curve look exactly as shown in EGR 270 homework problem 1, first create an Excel worksheet with the appropriate data (which can be downloaded from the course web page). For the aluminum data (2024-T351), the columns of data are already prepared for graphing. You will need to create the appropriate columns for the steel data (AISI 1045HR). Once the data columns are complete, highlight the data to be graphed then do the following.

- 1) Insert (tab)
- 2) Select XY-scatter (very important!!!), pick the image with data points connected with straight lines
- 3) Create graphs for both the aluminum and steel data on their own worksheets.
- 4) Before modifying the appearance of either graph, you should combine them into a single graph. Left click on the graph's box (of either graph). Copy. Then left click on the other graph's box and paste.

Once the basic graph has been completed, further manipulation is required:

- 5) To manipulate line color/weight/type and to manipulate the marker details (color, shape, etc) right click on the data line on the graph. Select "Format Data Series..."
- 6) Legend: if there is only one set of data, you should not include a legend (but Excel creates one anyway). Also, for data such as the stress-strain data, the data points are so close together that if you use markers they blend together and give the appearance of a fat line (not wanted) – so legends are pointless for this type of data! To remove the legend, select it and hit "delete" key.
- 7) To modify the axis (presentation of the number, scale range, axis markers, etc.) right click on the numbers in the axis and select "Format axis..."
- 8) To label the axis, left select the graph, then select the Layout tab, and select "Axis title". You can also modify the Chart title using the "Chart title" tab.
- 9) To add text, lines, arrows, etc., select the Insert tab. Lines, arrows and other similar drawing features are in the "Shapes" tab.