Michael Frajman- 1631231

Mr. Robert Vincent

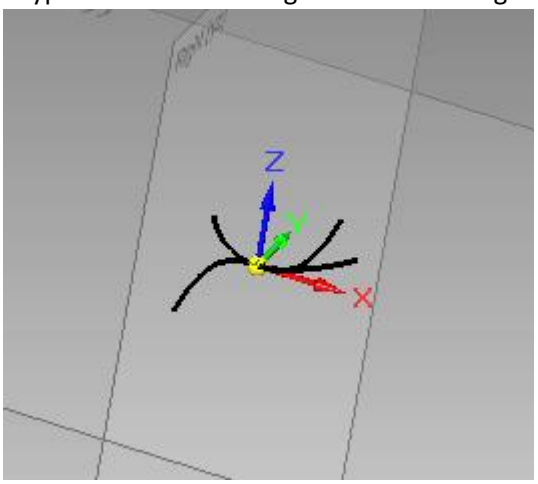
Technical Drawing- 420-LCV-05 gr.1

April 3, 2018

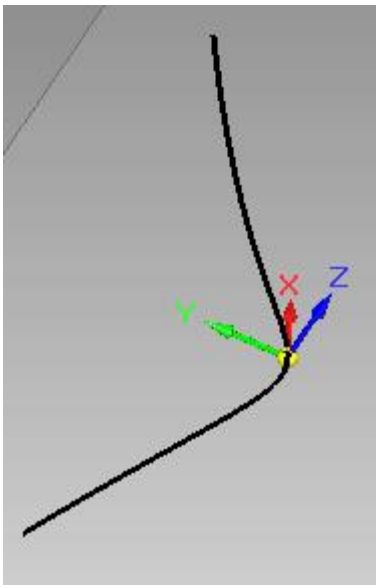
Assignment 4- Description of Construction

Part 1- Using Method 1: Cross Curve Tool

1) Import the excel spreadsheets of the cubic and parabola by selecting the dropdown from keypoint in the surfacing tab and choosing curve by table

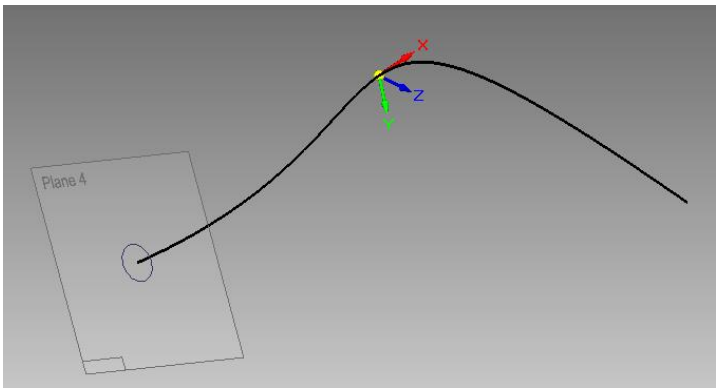


2) Select the cross curve tool, then select either the parabola or cubic line, click the green check box and select the other cross curve before finishing

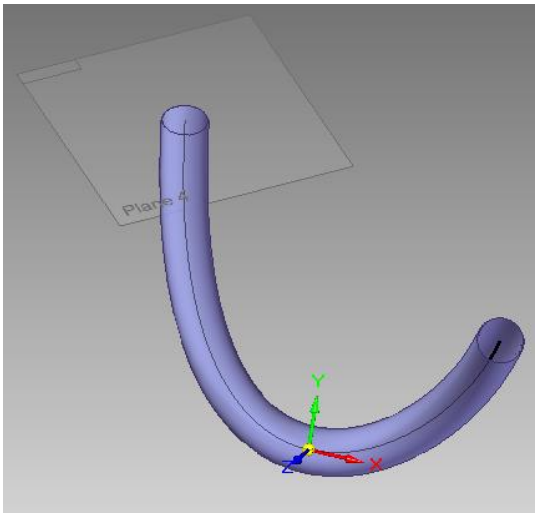


3) Select plane normal to curve under more planes, select the curve made in step 2 and place a plane at one end of the curve
4) Go to the sketching tool and create a sketch in the new plane from step 3

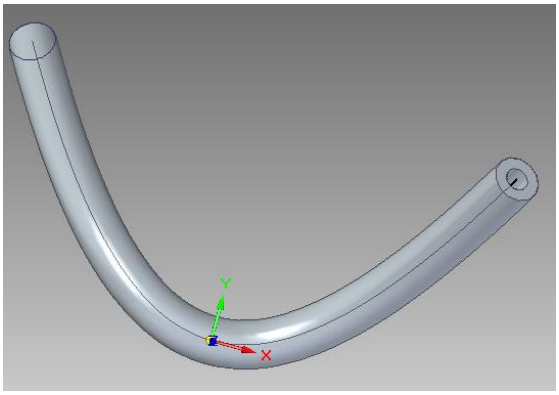
5) Sketch a circle by centre point on the tip of the curve from step 2, the circle has a diameter of 2mm



6) Under the surfacing tab, select the swept protrusion tool, keep the settings on single path and cross section, choose the curve from step 2 as the path and the circle from step 5 as the cross section



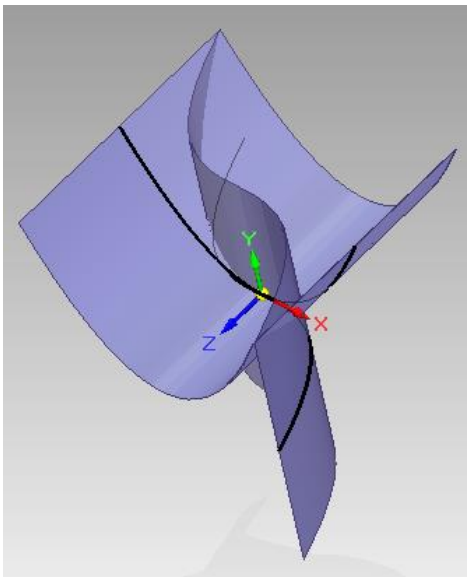
7) Under the home tab, go to the add drop down and select thicken by body, select the surface from step 6 and thicken inward by 0.5mm



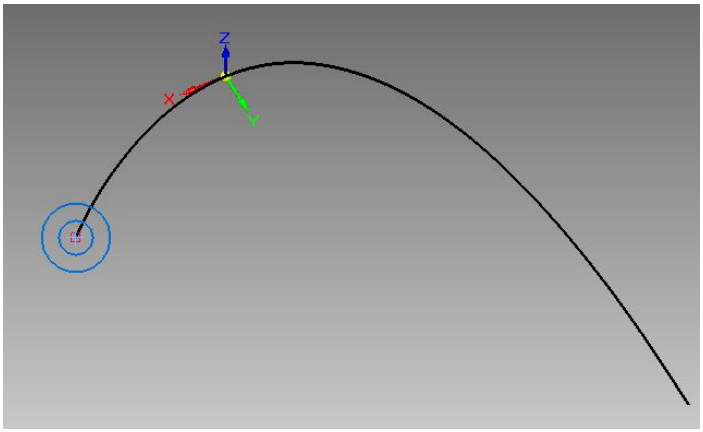
8) Under the view tab select part painter, painting by face, set the interior surface of the part in step 7 to one color and both faces to another color, also color the outer surface with a transparent color

Part 2- Using Method 2: Intersection of Surfaces

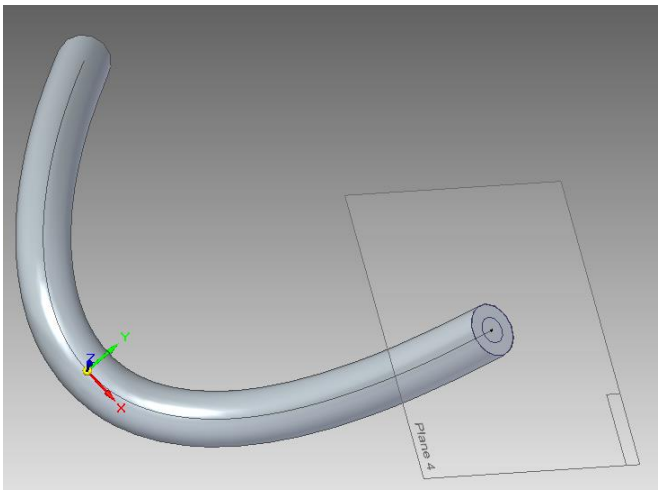
1) Same as step 1 from method 1
2) Under the surfacing tab, select extruded, extrude both curves symmetrically from step 1 by 20mm



3) Using the intersection tool under surfacing, create a new curve by selecting the surfaces created in step 2
4) Follow steps 3 to 5 from method 1
5) Create an additional circle by centre on the tip of the curve from step 3 with a diameter of 1mm

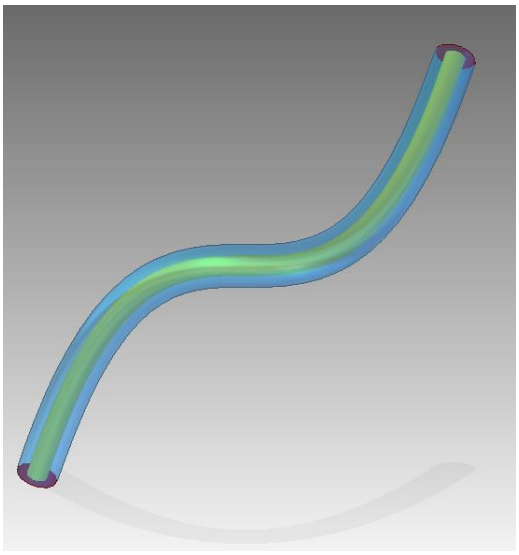


6) Under the home tab and go to the add dropdown, select swept protrusion, keep the settings on single path and cross section, choose the curve from step 3 as the path and the outer 2mm circle as the cross section

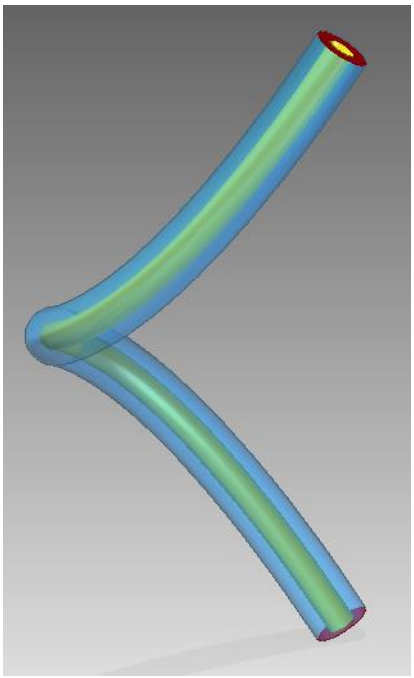


7) Under the home tab and go to the cut dropdown, select sweep, keep the settings on single path and cross section, choose the curve from step 3 as the path and the circle from step 5 as the cross section
8) Same as step 8 from method 1

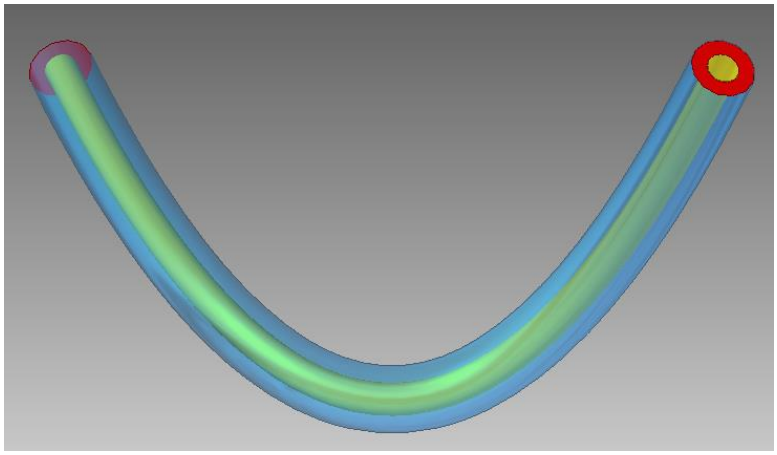
<u>Final Look of Part:</u>



FRONT



RIGHT



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