Section Views with SolidWorks

ENGR 1182
SolidWorks 09
Section Views

- Multi-view drawings may not be adequate to define all features in many types of parts.
  - Some may be obscured
  - Too many hidden lines can cause confusion.
  - Section Views are used to reveal interior details.
Section View Drawings

Definition: Views of parts with cutouts to show inner details

Section View Components:
1. Cutting Plane Line
2. Viewing Direction
3. Cutout View (Section A-A)

Dimensioning in SolidWorks
Full Section Views

Object cut completely in half by cutting plane perpendicular to the viewing plane to show full interior
Half Section Views

Half of interior visible by cutting out part of the object

Section B-B
Section Views in SolidWorks

Let's use SolidWorks to add a Section View to the following Drawing.

Dimensioning in SolidWorks
Section Views in SolidWorks

In the View Layout Tab of a Drawing file there is a “Section View” Button.

In the drop down box select the desired section.

Position the “purple” section with the mouse and left click and click on the green arrow.
Section Views in SolidWorks

The section view can now be placed on the drawing by dragging the mouse to the desired location and clicking. Once the cutting plane is set the dialogue box changes to allow the user more options. The cutting plane viewing direction and letter can be changed.

In Annotation, the proper Centerlines can be added. Note that no cross hatching appears on the counter sink since that area is not touched by the cutting plane.

Note that in a proper drawing this view would not be present since it is replaced by the sectioned front view.
Section Views Wrap Up

Section Views

1. Show Interior Detail
2. Section View Components
   1. Cutting Plane Line
   2. View Direction
   3. Cutout View
In-Class Problems Section Views with SolidWorks

Instructions:

1. Download the SolidWorks Part file (Section_Views_In-Class_Part.sldprt in SW_09_ZIP) from the SolidWorks 09 OSU Canvas and open it in SolidWorks. Open a new, blank OSU_Title_Block.slddrw drawing file.

2. Project the object as a Front View, Top View, Isometric View, and a Front View Shown as a Full Section, as shown in the drawing below.

3. Add all centerlines and text boxes shown.

4. Fill out all of the information required in the Title Block.