

Types of sections view

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The paper "Types of Sections View" is an excellent example of a technology assignment.

A section view is obtained by cutting (or breaking) a part of an object and thus exposing the interior construction details of that object. The exposed surface of the object is indicated by cross-hatching lines. There are different types of sections chosen according to the shape of the object as described below:

Full Section

When the cutting plane extends through the entire object, along with the center line, the section is described as a full section. The half of the portion between the observer and the cutting plane is removed. The main advantage of this section is that it's simple and all the hidden lines become visible.

However, this section may not prove to be useful for objects which do not have symmetrical internal features.

Half Section

When the cutting plane extends through half of the object, along with two central lines, a half section is obtained. The portion cut is only a quarter of the object. The advantage of this section is that it shows both exterior and interior view simultaneously and is suitable for symmetrical objects (along with the axis). The disadvantage is this section is suitable for only symmetrical objects.

Offset Sections

When the cutting plane instead of extending along a continuous line, is bent by 90 degrees, in order to pass through different internal details aligned asymmetrically, offset section is obtained. The front view thus shows all the holes, and voids, this is the advantage of this section. However, objects

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having different elongated parts at an angle with each other cannot be clearly described by this section.

Revolved & Removed sections

For objects with parts like arms of a wheel, spokes, web, revolved and removed sections are used. Here, the cutting plane passes perpendicular through the part of the objects. The sectional view is then rotated 90 degrees and projected as an adjacent view or a removed view. A removed view is located on the extension of the cutting plane, separated from the front view of the object. The advantage that these views offer is that the representation of the extended features is simplified. The disadvantage is that the section is best suited to those parts, having no hollows, ribs etc.

Broken Out Sections

For objects which are solid without any cavities and their exterior view representing almost a clear picture of their shape, broken sections can be used to represent that simple hole or recess. A free handbrake line is used to bind the section view on a regular front view. Hence, the advantage of this section is that it can be easily used for objects with little internal features. The disadvantage is that for objects with complex internal features this section may not prove suitable.

Aligned Sections

For those parts that have featured at an angle with each other, such as rims, arms, lugs aligned section is used. The features are rotated and brought in alignment with the cutting plane and then projected. This section proves to be advantageous only in these cases. The features are shown at a distance from the central axis which equals their true displacement. The disadvantage of such sectional view is that the orthogonal projection theory is violated.

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