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MECHANICAL ENGINEERING

1. A sectioned surface is represented using a sectioning line. A section is used to show the detail of a component, or an assembly, on a particular plane which is known as the cutting Plane.
2. The principles followed when dimensioning a drawing include;
* All dimensions should be thin continuous lines
* Each dimension be illustrated by arrow heads touching the extension lines and pointing in opposite directions
* Extension lines should have a gap of about 1cm from the drawing
* Crossing of dimension or extension lines must be avoided
* All dimensions should be given a decimal format
1. Half section: this is a view of an object showing one-half of the view in the section, the diagonal lines on the section drawing are used to indicate the area that has been cut.

Full section: this is formed as a result of the imaginary cutting plane passing through the entire diagram, splitting the drawn diagram.

1. A leader line is a thin continuous line used in connecting a dimension figure with the feature to which it applies. One end of the leader terminates either in an arrowhead or a dot.
2. A)scale 5:1

This means the drawing is 5 times more than the original size drawn

b) scale 1:10

This means the drawing is ten times smaller than the original size given

|  |  |
| --- | --- |
|  |  |
| diameter |  |
| radius | R |
| square |  |
| Spherical radius | SR |
| Center line |  |
| Cutting plane line |  |
| Long break |  |

1. Elements considered in obtaining a projection:
* Special properties the user want to preserve
* The area the user is mapping
* Shape of the area the user is mapping
* Size of the area being mapped

Orthographic projection

This is the type of projection that deals with the process of representing three dimensional objects in two dimensions. It is a form of parallel projection. It is drawn in two forms; First angle projection and third angle projection

1. A projection of an object is called an orthographic projection when the parallel lines are orthogonal to the projection plane
2. First angle projection: this is a projection method of creating a 2d drawing of a 3d object

Third angle projection: this is a method of orthographic projection which is a technique in portraying a 3d design using a series of 3d views

OBJECTIVES

1. B
2. A
3. A
4. C
5. A
6. A
7. C
8. B
9. C
10. A
11. C
12. B
13. A
14. D
15. B