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What is CAD?

CAD means Computer Aided Design, in which computers are widely used for any type of designing such as mechanical, structural, architectural or electrical. Computed aided design is mostly carried out with the help of software called autocad. CAD is simple computerized way of designing to make our design accurate and also improves the quality of drawing. CAD can also be referred to as the process of creation of technical drawings of different domains. Computer aided design helps for making communication of design concepts between engineers very smooth and easy. CAD technology is almost used for all type of industries with backgrounds whether it is civil, electrical, mechanical, marine, chemical etc. Computer aided design is considered to be the simpler and most effective way of understanding the design concepts. CAD design carried out in autocad software has file extensions like .dwg or .dxf. These files are called electronic files. CAD based drafting and designing is just a replacement of hand sketches, rough drawing and ideas.

Computer aided design can be of two types:

2D CAD based Design

2D CAD mostly includes plan views, sectional views, elevations, many electrical layouts for example lighting layout along with 2D construction drawings.

3D CAD based design.

3D CAD design includes process of creation of accurate smart 3D models for example architectural building 3D models, mechanical product 3D models, electrical models like transformer, Induction Motor etc. Effective CAD techniques to be kept in mind for improving efficiency and increasing productivity.

One should follow some CAD standards while working with autocad

1. Proper Dimensioning:

One should check the units accordingly for example for architectural CAD drawings units should be set as architectural unit while working for mechanical drawing it should be set as engineering units. Proper dimensioning includes factors like arrow size, text alignment, layer type, leader type etc.

2. Layering:

Design engineer or drafter should take care that whole drawing should contain its components in their respective layers. For example all windows used in the drawing should be in same layer, door should be in other and text in separate layers likewise to be followed for other components of the drawing.

3. Client's standards:

It should be kept in mind that whole drawing should be according to client's standards and specifications if provided. If not provided we can easily carry on with our own design standards.

4. Increasing Quality checks:

Productivity can be effectively improved by increasing number of quality checks which helps to reduce the errors in the drawings. The CAD based drawings must undergo series of checks like self check, QC by team leader, QC by project manager etc.

Thus by using above CAD drafting techniques we can improve the efficiency and accuracy of drawings.

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