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Drawings in Engineering

Drawing is one of most important things in engineering. Every engineer learns to drawing in school. Today, drawings are generally not drawn by hand but still every engineer should know how to draw by hand. Because you never know when machines will take over the world!

Scale is the key factor on a drawing. It is, the relation between the real size of items and its size on drawing. For example 1:100 means an object with a length of 100mm in real life would measure 1mm on the drawing. This relation depends on size of the item. If you gonna draw a entire building, you should use a small scale (like 1:100 or 1:1000). On the other hand, large scales are generally preferred for small items (for example 1:2, 1:1).

Lines are also important on engineering drawing. Not every line on an engineering drawing is equal. The most common is a continuous line, also known as a drawing line. This represents the physical boundaries of an object. On the other hand hidden lines can show something that would not be otherwise visible on the drawings. Centre lines are used to show hole and the symmetric properties of parts. Showing symmetry can reduce the number of dimensions and make the drawing more eyepleasing, thus easier to read. Extension lines annotate what is being measured. The dimension line has two arrowheads between the extension lines and

the measurement on top the line.

Another important point about drawing in Engineering is projection. There are a number of techniques of projection that can be used to represent three-dimensional objects in two-dimensions by projecting their image onto a planar surface. Drawing projections should comply with relevant standards to prevent misunderstanding and avoid errors in interpreting the drawing. Orthographic projection is a type of parallel projection in which the four orthogonal views of an object are shown. The orthographic projection commonly used in the Turkey is called first angle projection. Axonometric projection creates a true plan set at 45° , which retains the original orthogonal geometry of the plan. It is particularly suitable for representing interior designs, such as kitchen layouts. Planning drawings can also be effectively represented as axonometric projections, showing the relationships between buildings and topography. The isometric plan view is slightly distorted, using a plan grid at 30° from the horizontal in both directions. It can be used to show the nature of the design and explain construction details more clearly than an orthographic projection. When primary information is drawn in elevation, the interpretation can be enhanced by an oblique projection. This is a simple method of producing two-dimensional images of three dimensional objects. The differentiating characteristic of oblique projection is that the drawn objects are not in perspective, and so do not correspond to any actual obtainable view.

Also tools (or computer programs), hardworking, team work and many things are important in drawing in engineering. If you are not an engineer don't try at home (Joke). Have a nice day!