

Tuesday

Sheet Metal

Parth Jodari
2K20/B17/33
Workshop

Sheet Metal Tools

1) Cutting tools :->

(i) Chisels :-> It is used to cut the sheets and remove the unwanted metal from the surface of job by chipping.

(ii) Snips or Shears :-> It is used for cutting or shearing thin metal sheets.

2) Striking tools :->

(i) Hammers :-> It is used on metal sheet for straightening, bending, leveling.

(ii) Punch :-> It is used for making cut work, locating centres etc.

3) Supporting tools :->

(i) Stakes :-> It is used for doing various operation like forming, bending, seaming etc.

(ii) Anvil :-> It acts as a base for smithy work.

(iii) Swage block.

4) Marking & Measuring Tools

(i) Steel rule

(ii) Scribers :-> It is used for making lines

(iii) Trammel.

- (iv.) Divider
- (v.) Drawing Blade Protectors
- (vi.) Wire Gauge.

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5.) Bending & Folding tools

- (i.) Plies \Rightarrow It is mainly used for bending the sheet metal to the required shape.
- (ii.) Folding bars \Rightarrow It is used for bending & folding operation of sheet metal.

\rightarrow Sheet metal cutting operations.

- (i.) Shearing Operation: It is the process of separating sheets into two or more pieces.
- (ii.) Blanking & Fine Blanking Operation \Rightarrow It is the process of cutting out a predefined shape from the sheet metal.
- (iii.) Punching Operation \Rightarrow Piercing operation is the process of cutting small, cylindrical holes in the sheet metal.

Perforating Operation \Rightarrow Similar to piercing but holes are not usually round in shape.

Slotting Operation \Rightarrow It is the process of cutting regular rectangular holes onto sheet metals.

Notching Operations \Rightarrow It is the process of where shapes are cut from the edges of the sheet metal.

Sheet Metal Forming Operations

Forming operations cause stresses below the sheet metal's ultimate strength, resulting in distortion

Bending Operation

It is the process of transforming the straight metal sheet into a curved form. There are a number of different types of bending.

- ★ Channel Bending
- ★ Offset Bending
- ★ Edge Bending
- ★ U- Bending
- ★ V- Bending

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