Tuesday

Parth Johri

2K20/B17/33

Assignment No 3.

18/05/21

Workshop.

Forging

→ Forging is defined as the uncontrolled plastic deformation or working of metal into predetermined shapes.

→ Forging implies the use of powerful pressure from a hammer or press on metal which has been heated to its plastic range.

Tools & Equipments Used in forging.

1) Anvil → Used for supporting hot job while hammering is done for shaping it into various shapes

2) Swage Block → Used for holding hot bars during bending, support for punching holes in a job & various holes

3) Tongs → It is a holding device used to support and grip the job while some operation is carried out.

4) Hammers → Used to strike a tool or a job

5) Hardie → It is filled in the hardie hole provided in the tail of anvil. It has a cutting edge at the top of body.

6) Fullers :-> Used for necking down to form depressions

7) Swage → Swage is used to reduce / finish to round, square / hexagonal form. It consists of two parts - top part with handle & bottom part with square shank.

8) Flatters → Used to give smoothness and accuracy to articles which have already been shaped by fullers and swages.

9) Punch & Drift → Punch is used for making holes in a job which is at red hot condition
Drift is used for punching in a job to expand or open for accurate dimensions of hole.

10) Set Hammer → It is similar to flatter and is used for finishing corners and shouldered work where the use of flatter is inconvenient

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Forging Temperature for Different Materials

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→ Forging temperature of mainly used materials are

i) Wrought iron — 850°-1300°C

ii) Mild Steel — 750°-1300°C

iii) Medium carbon steel — 750°-1250°C

iv) High carbon steel — 750°-1150°C

v) Stainless steel — 950-1200°C

vi) Brass, Copper, Bronze — 550°-900°C

vii) Aluminium, Magnesium — 300°-850°C