

TUESDAY

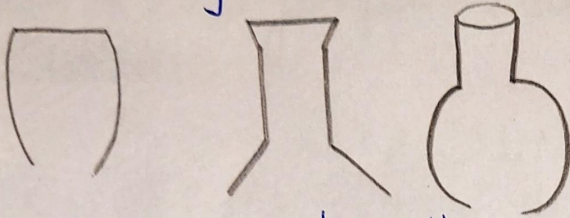
25/05/21

ASSIGNMENT-4

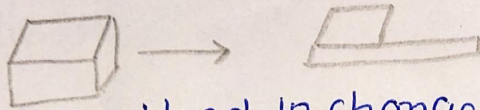
PARTH JOHRI
2K20/B17/33

FORGING OPERATIONS

1) Upsetting - Process of increasing thickness or the cross section of metal

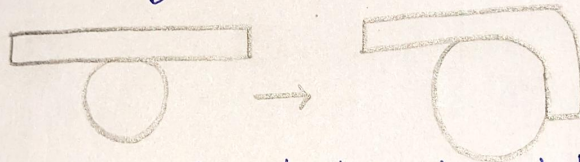


2) Drawing down - Length of metal is increased



3) Setting down - Used to change the roundness of a corner for making square by using the set hammer.

4) Bending -

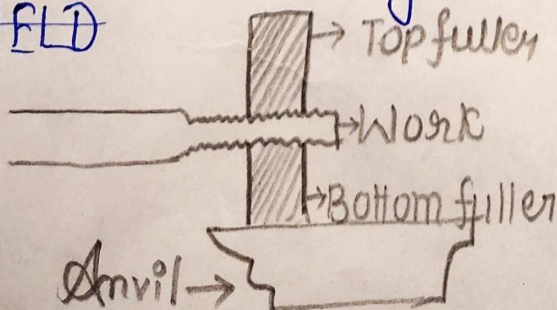


5) Cutting - Done by using hot and cold types of chisels
• Cold cutting - thin flat or round sections

6) Punching and drifting - holes of different size and shape

7) Fullering - Length of work piece is increased at cost of its width.

WFLD

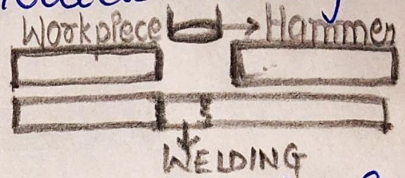


Signature

WELDING

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2K20/BI7/33

- Two pieces of same metal are heated together with external pressure so that they can act as a single piece.
- Flux is used for protection of heated metal from oxidation.



ANNEALING

- Process of heating material up to critical temperature.
- Improve properties like relieve internal stress, softening the metal.

NORMALISING

- Heating material at a certain temp of 50°C and then cool them in air.
- To remove internal stress, refine the steel structure and ductility.
- improve tensile strength

HARDENING

- Process of heating material at temp above critical temp and then cooling it suddenly in liquid.
- Sudden cooling - quenching
- Improve toughness, strength, ductility and elasticity process.

TEMPERING

- Improve toughness, reduce internal stress produced during previous heating, make metal metal shock resistance

Hydro

COLD FORGING

PARTI+JOHRI
2K20/B17/33

- Bar stock is cut, cut bar is sent to die

- Forge the shape in first die.

- Second die to further shape the part

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IMPRESSION DIE FORGING

CLOSED DIE FORGING

- Deformation of metal at forging temp. with one or more die impressions

- Performed with pieces and hammer

- In fresh forging, the block of metal is forced into layer called flash flows out between the die.

Spohri