

Section - 6

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Q1
Ans: →

Mountings

- Devices which are used for the safety & operation of boiler are known as mountings.

- These are generally mounted on the surface of boiler.

- Control fluid parameters at the inside of the boiler shell.

- These are essential part of a boiler, without which boiler operation is impossible.

- E.g. → Water level indicator, pressure gauge, safety valve.

Accessories

- Devices which are used to improve the efficiency of boilers are known as accessories.

- These are integral of boiler, but not mounted on it.

- Control fluid parameters at outside of boiler shell.

- These are not essential part of a boiler, without which boiler can operate though at lower eff.

- E.g. → Superheaters, Economizer, Air preheater.

⇒ Explain the following Mounting & Accessories are :-

→ Water level Indicator :-

The function of water level indicator is to indicate the level of water in the boiler constantly.

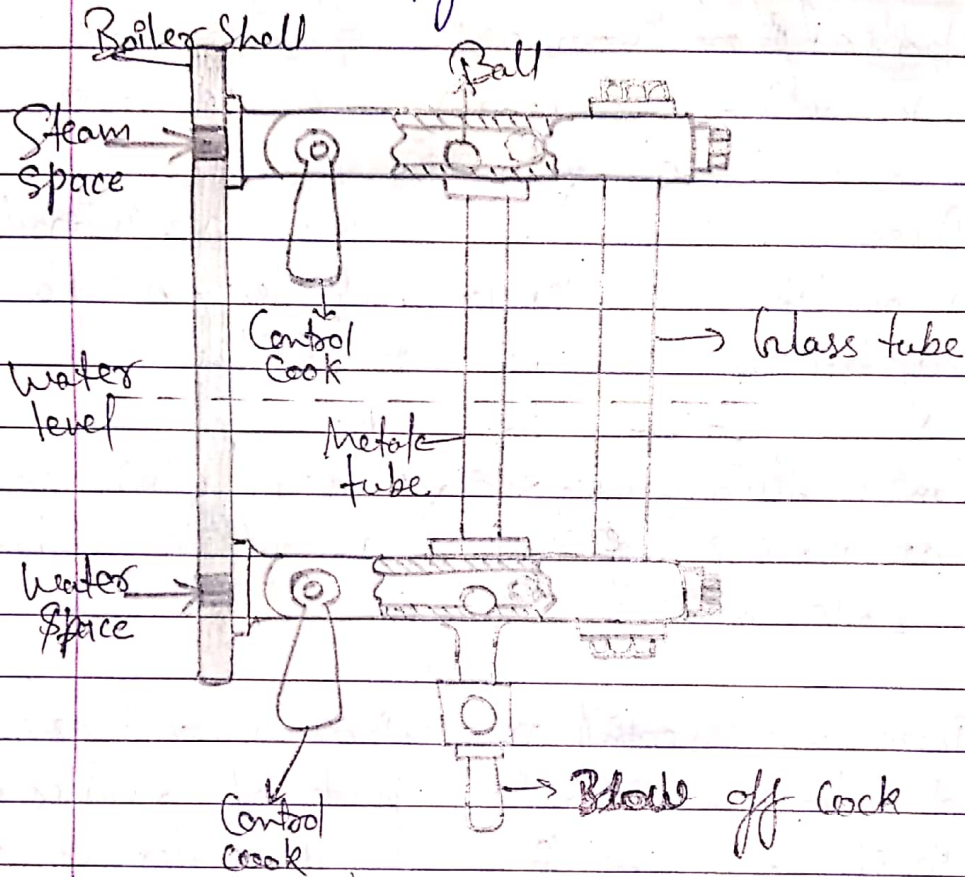


Fig:- Water level Indicator.

→ Safety Valves :- Its function is to prevent the steam press. from exceeding a limiting max. press. value.

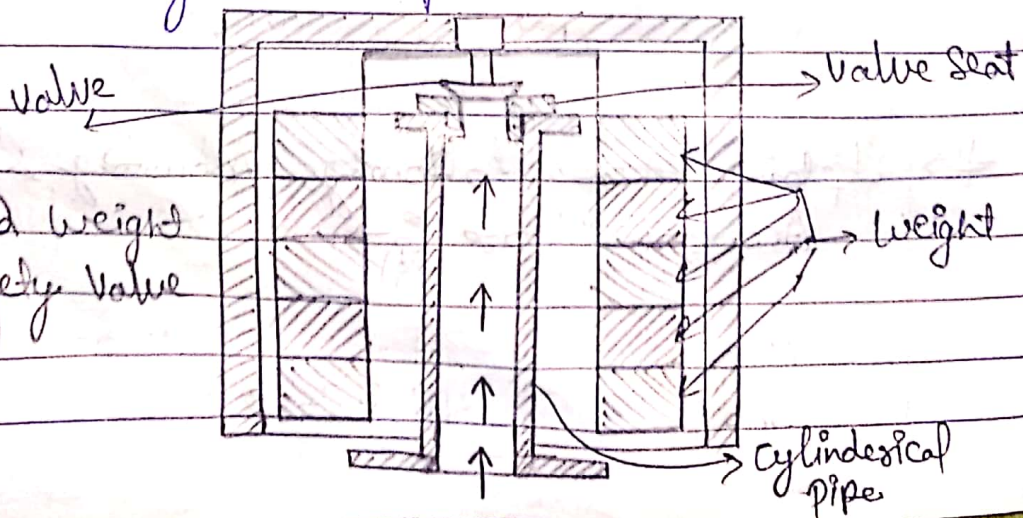


Fig:- Dead weight Safety Valve

⇒ Fusible Plug :- Its function is to protect the boiler against the damage due to overheating or low water level.

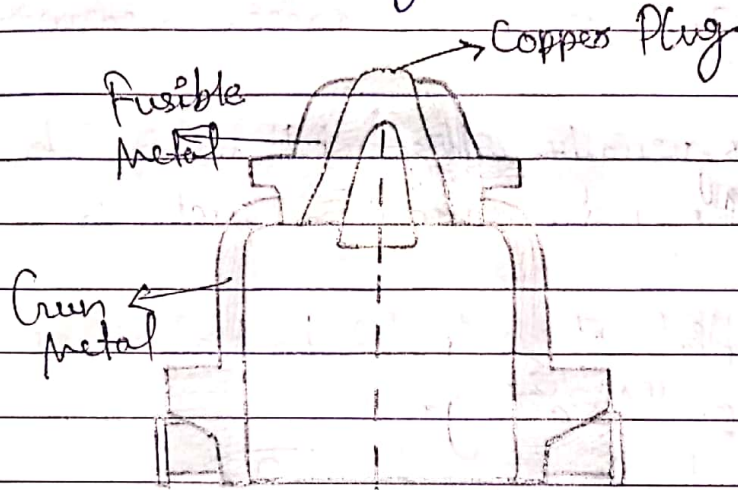
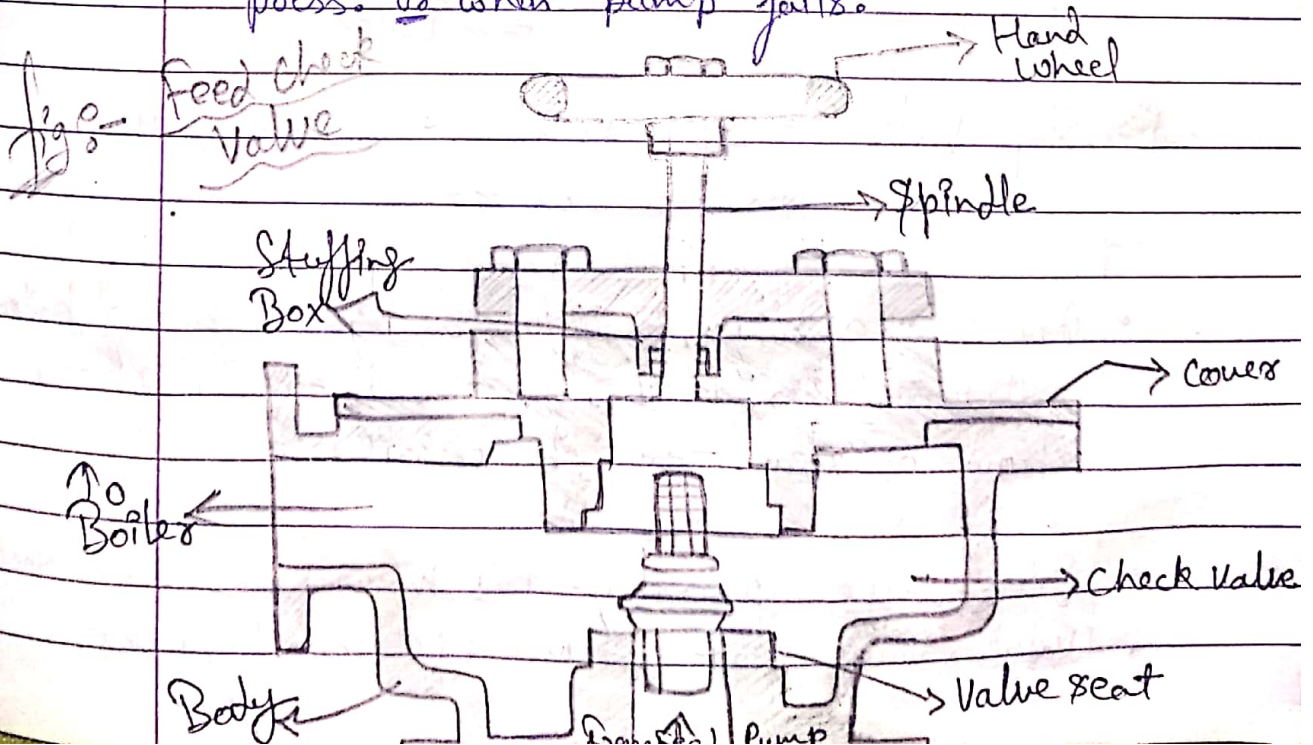


Fig. Fusible Plug

⇒ Feed Check Valve :-

The function of feed check valve is to allow the supply of water to the boiler at high pressure continuously & to prevent the back flow of water from the pump press. is less than boiler press. or when pump fails.



➔ Pressure Gauge:- It is mounted at the joint top of the boiler drum.

- Generally, Bourdon tube pressure gauge are being used for press. measurement.
- It is usually constructed to indicate upto double the max. working pressure.
- The dial is graduated to read pressure in "bar" or "MPa" gauge.

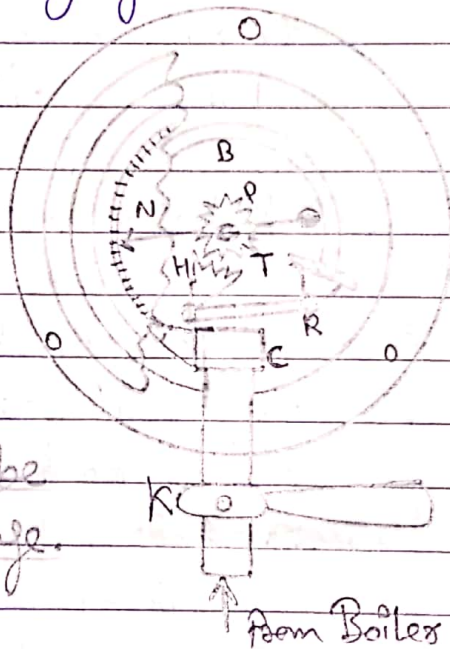
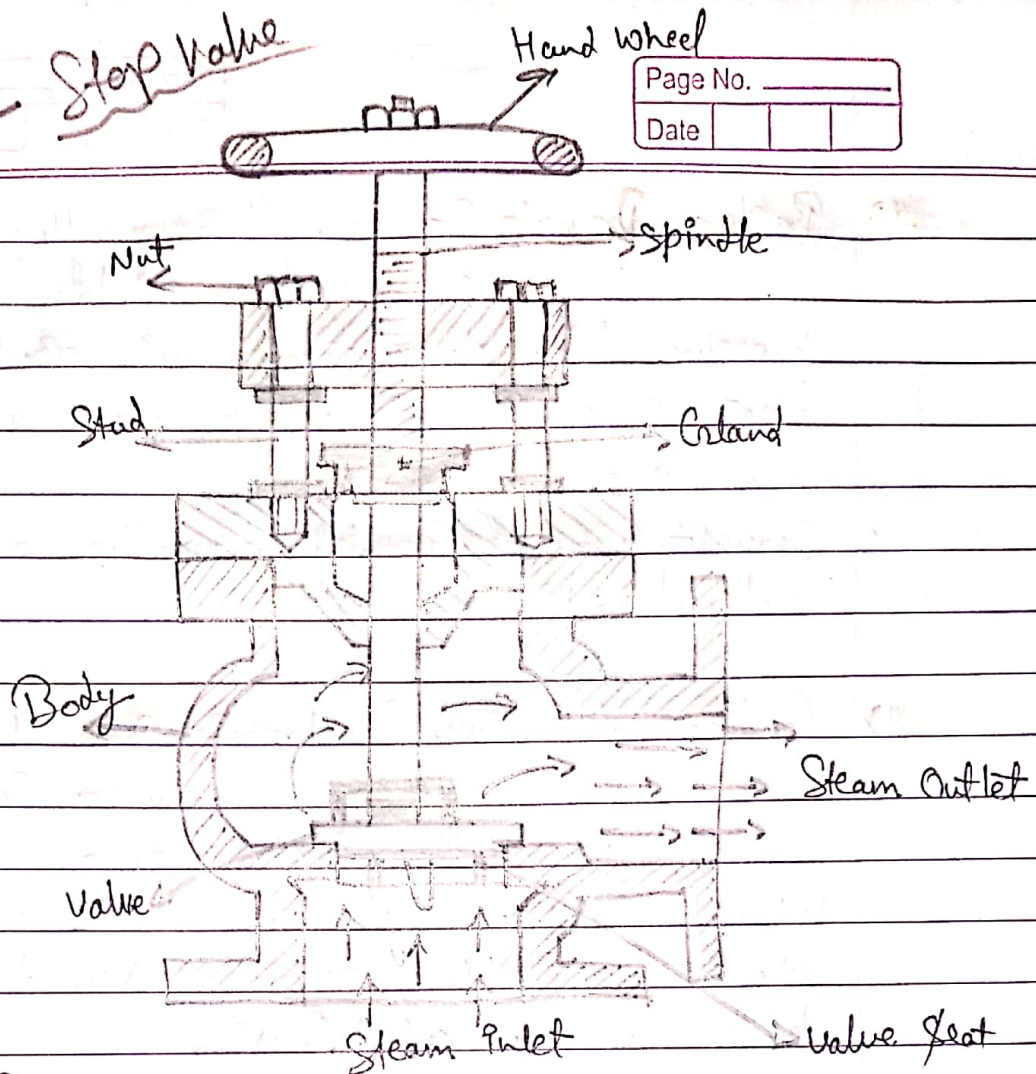


Fig. Bourdon tube Pressure Gauge.

➔ Stop Valve:- It regulates the flow of steam from the boiler.

- This is generally mounted on highest part of boiler shell & performs function of regulating the flow of steam from boiler.
- Stop valve generally has main body of cast steel, valve, valve seat & nut etc. are of brass.

Fig :- Stop Valve



⇒ Blow off Cock :-

- It valve fitted on the boiler shell directly on a short branch pipe at the lowest part of water space.
- It is used for periodical cleaning by discharging water & sediments from bottom.
- Boc also helps in regulating the salt concentration as frequent draining helps in throwing out the salt deposits.

Fig :- Blow off Cock

