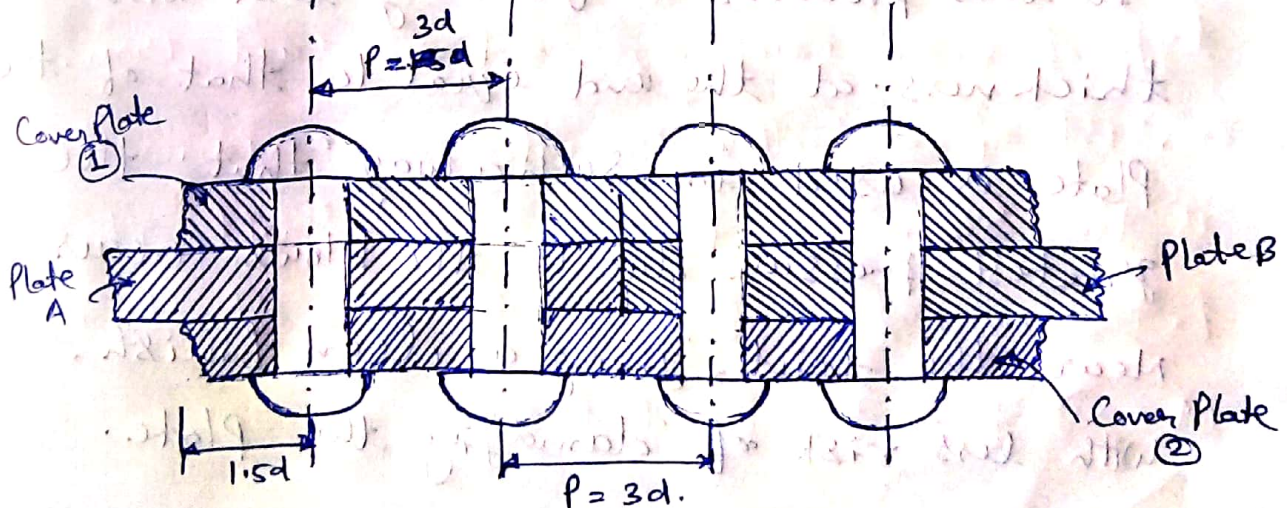
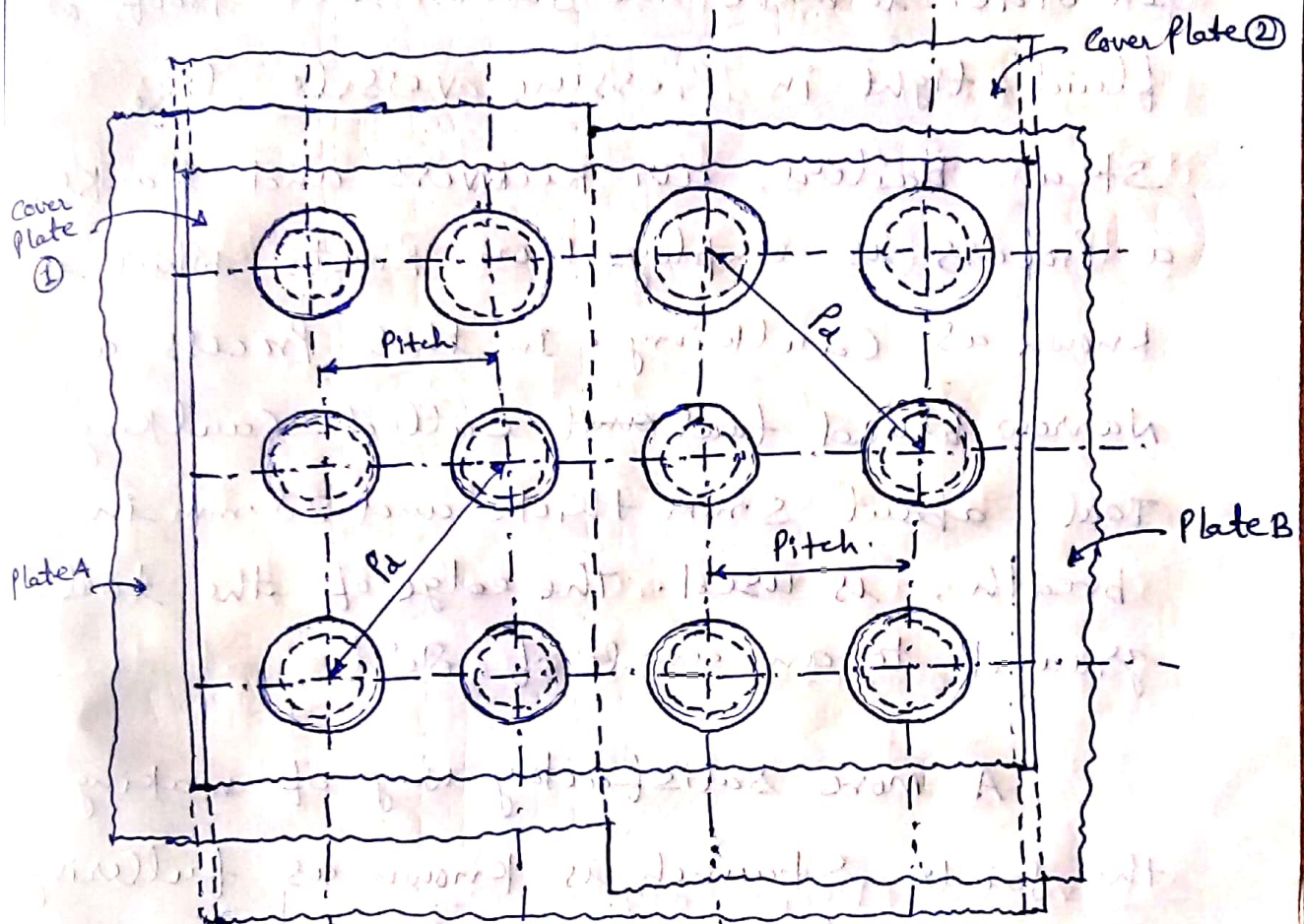


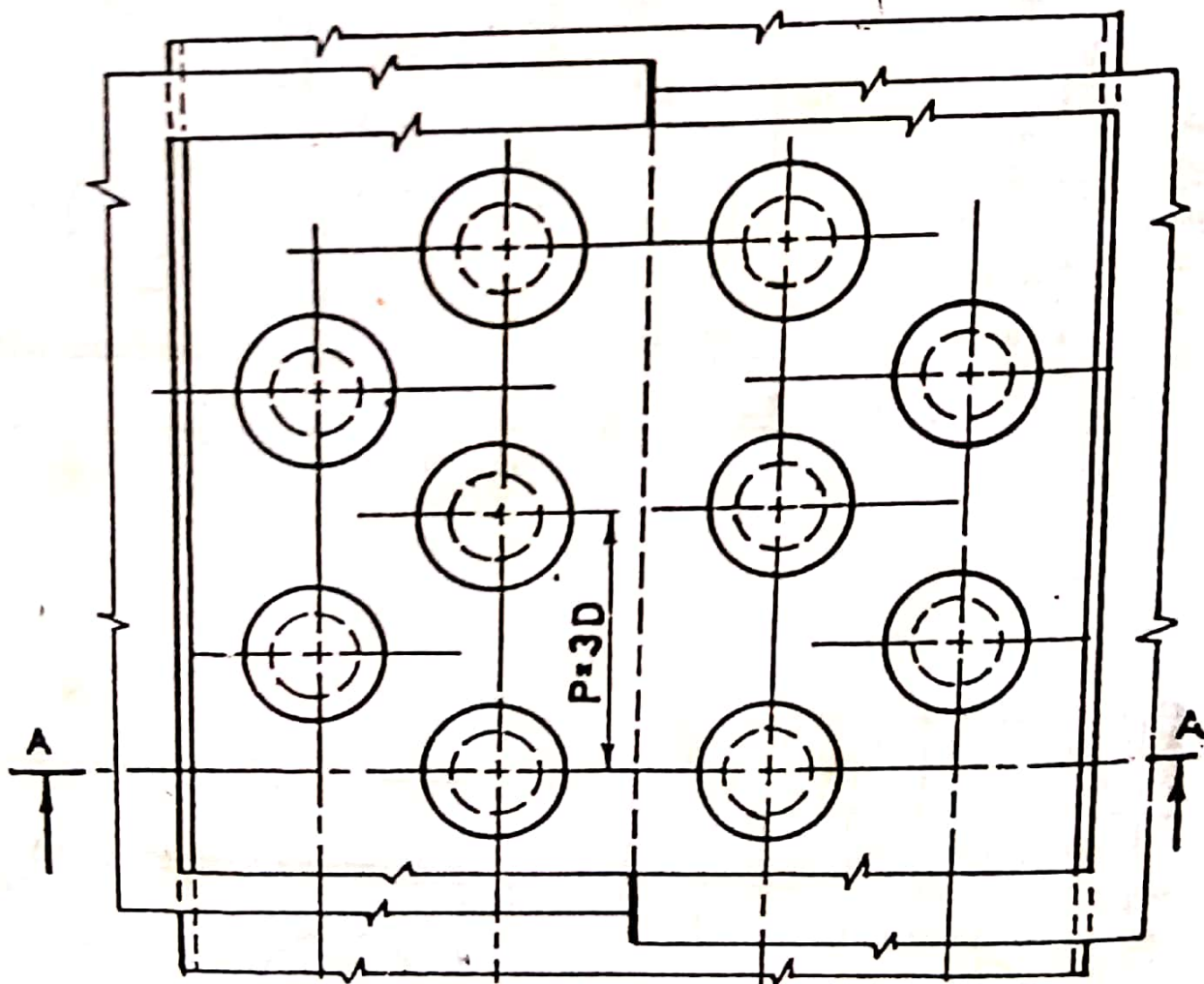
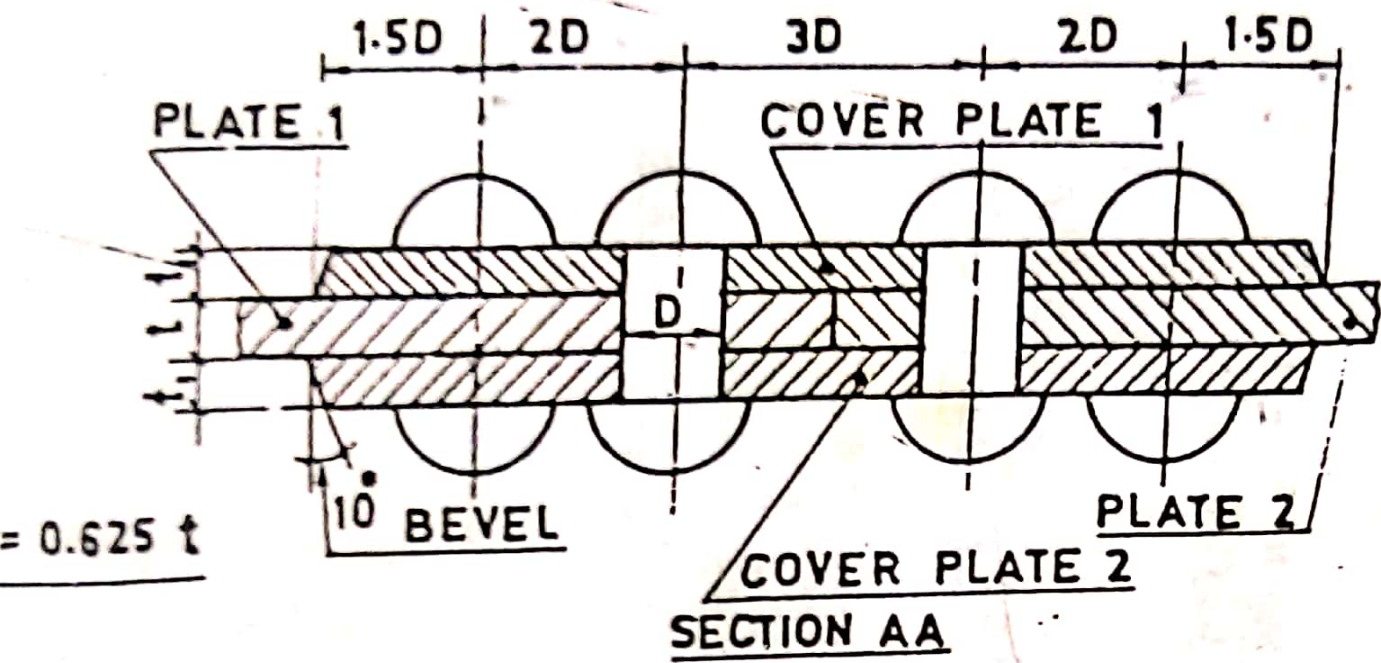
Double Riveted Double Cover Butt joint : (Chain Riveting)



where, d = dia. of Rivet

$$Pd = \text{diagonal Pitch} = \frac{(2P + d)}{3}$$

$$P = \text{Pitch} = 3d.$$



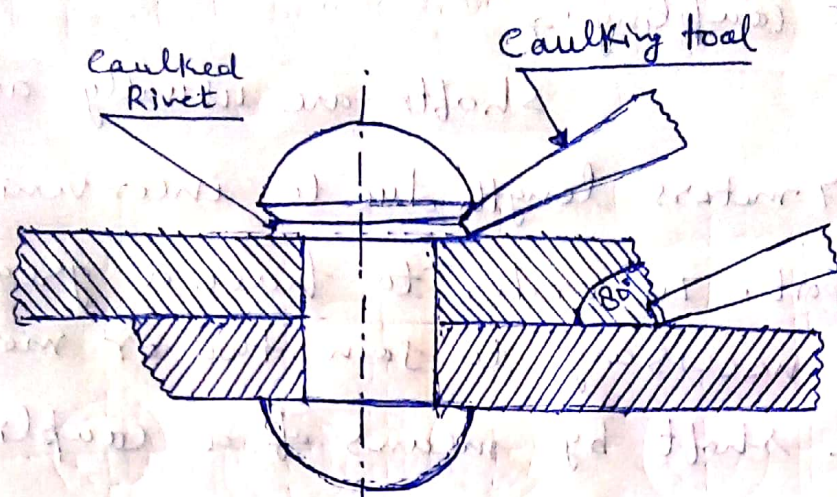
(b) Zig-Zag Riveting

Caulking And fullering :-

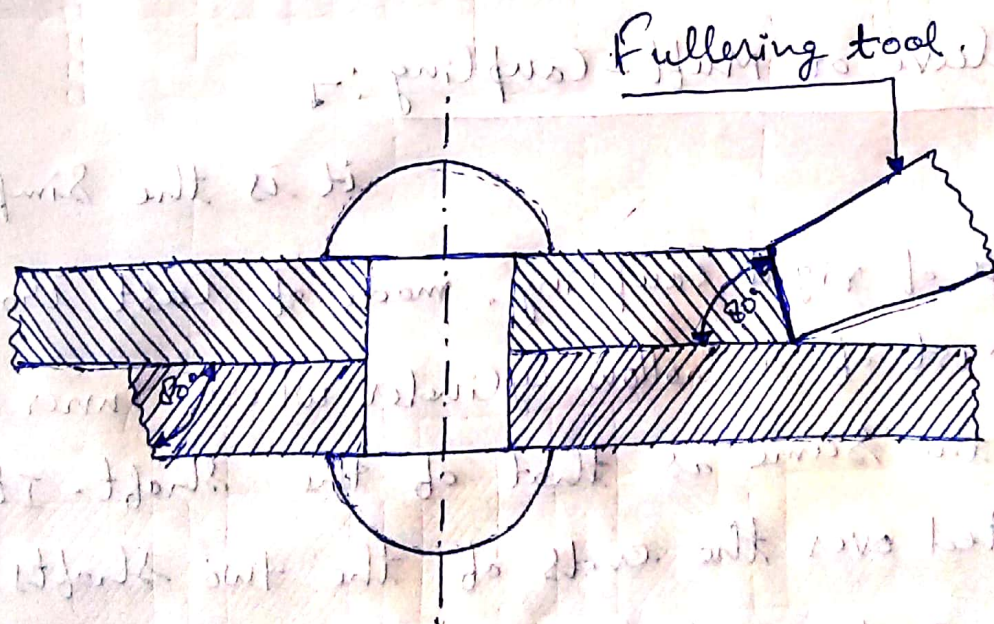
In order to make the joints leak proof or fluid tight in pressure vessels like steam boilers, air receivers and tanks etc a process is employed on rivets which is known as Caulking. In this process a narrow blind tool and called Caulking Tool, about 5mm thick and 38mm in breadth, is used. The edge of the tool is ground to an angle of 80° .

A more satisfactory way of making the joints staunch is known as fullering which has largely suppressed Caulking.

In this process, a fullering tool with a thickness at the end equal to that of the plate is used in such a way that the greatest pressure due to the blows occur near the joint, giving a clean finish, with less risk of damaging the plate.



Caulking Process



Fullering Process

Shaft coupling: →

shafts are usually available up to 7 meters length due to inconvenience in transport. In order to have a greater length it is necessary to join two or more pieces of the shaft by means of a coupling.

A coupling is termed as a device used to make permanent or semi permanent connection where as a clutch permits rapid connection or disconnection at the will of the operator.

Sleeve or Muff - Coupling: →

it is the simplest type of rigid coupling, made of cast iron. It consists of a hollow cylinder whose inner dia. is the same as that of the shaft. It is fitted over the ends of the two shafts by means of a gib head key.

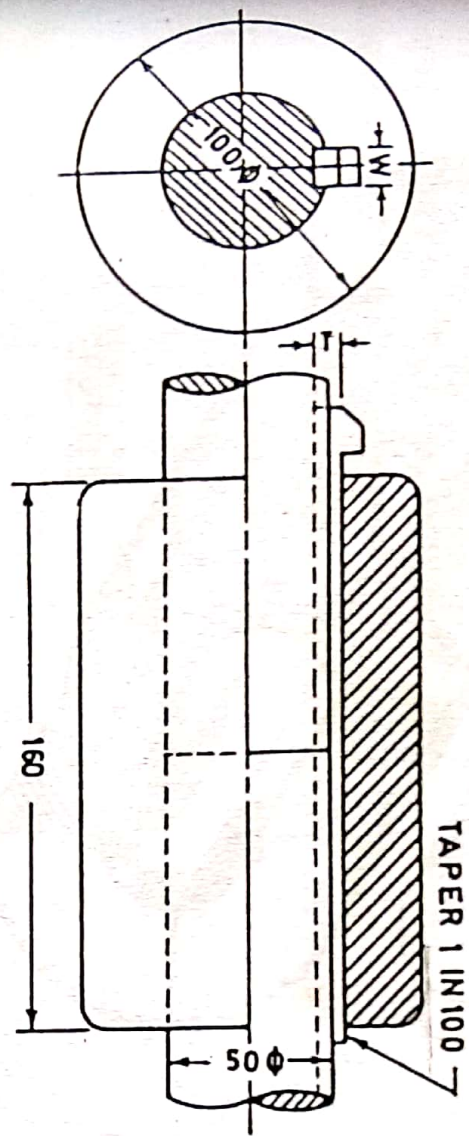
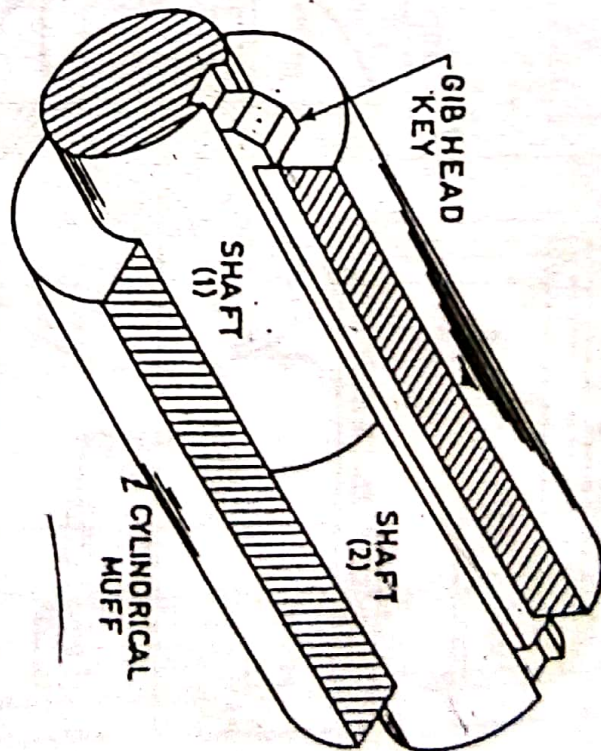


Fig 20.6. Muff Coupling



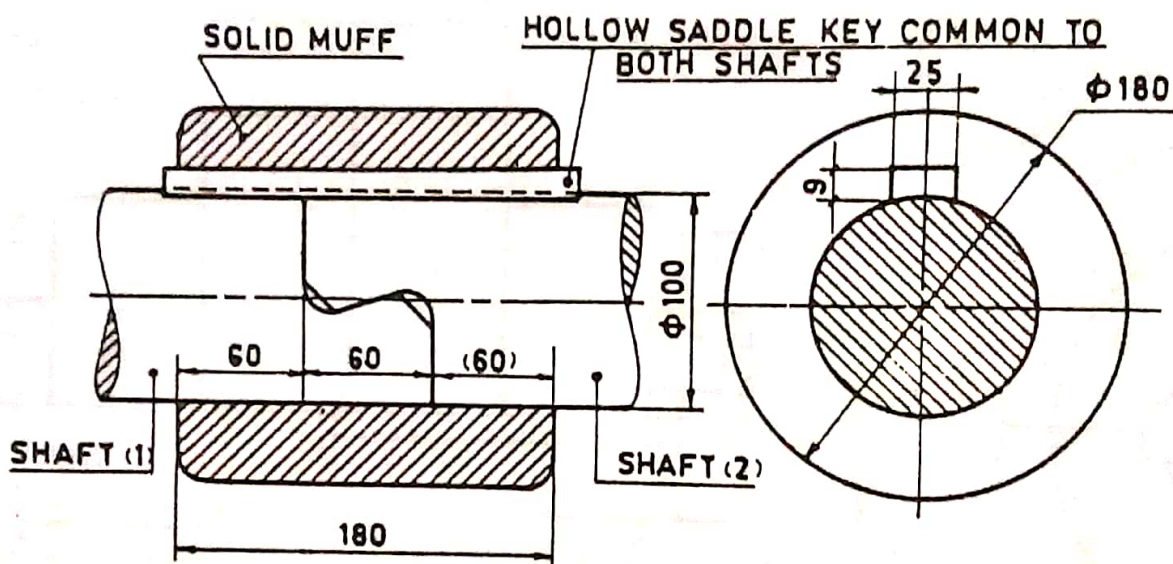


Fig 20.7. Half-Lap Muff Coupling