

Engineering Drawing:

Foundation Bolts: - To make proper and firm foundation of heavy machinery in concrete structure. A special types of bolts are used.

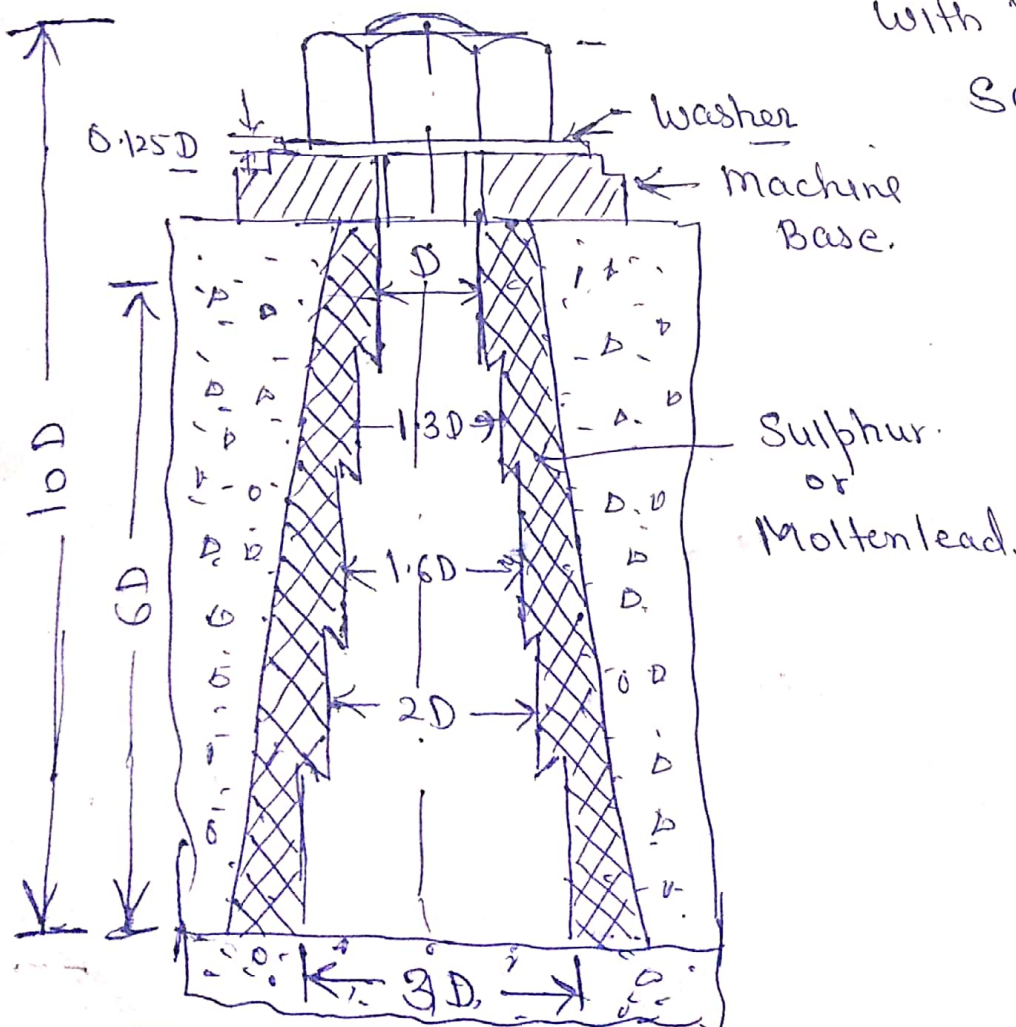
Foundation bolts are made from mild steel or wrought iron rods. The bolt size depends upon the size of machine. Some times molten lead or sulphur is also used which sets the foundation within a few minutes.

Types of Foundation Bolts:

1. Rag Foundation Bolt.
2. Lewis Foundation Bolt.
3. Curved (Bent) Foundation Bolt.
3. Eye (Hoop) Foundation Bolt.

1. Rag Foundation Bolt:

It has tapered body with rectangular or square in cross section. This bolt first set in lead and than in cement concrete.



(iii) **Lewis foundation bolt**

- This is a removable foundation bolt, means it is used for temporary foundation. One end of the bolt is straight and other is tapered as shown in the fig. To use this bolt, a hole is produced in cement concrete by using foundation block.
- Once the concrete sets-in, the bolt is placed in pit so that the tapered bolt surface, fits against the tapered face of the pit. A key is then inserted against the straight surface of the bolt.
- This arrangement makes the bolt firm in the concrete bed. The bolt can be easily removed by removing the tapered key.
- Generally this type of the bolt is not used for fixing machines. But it is commonly used for lifting huge stones.

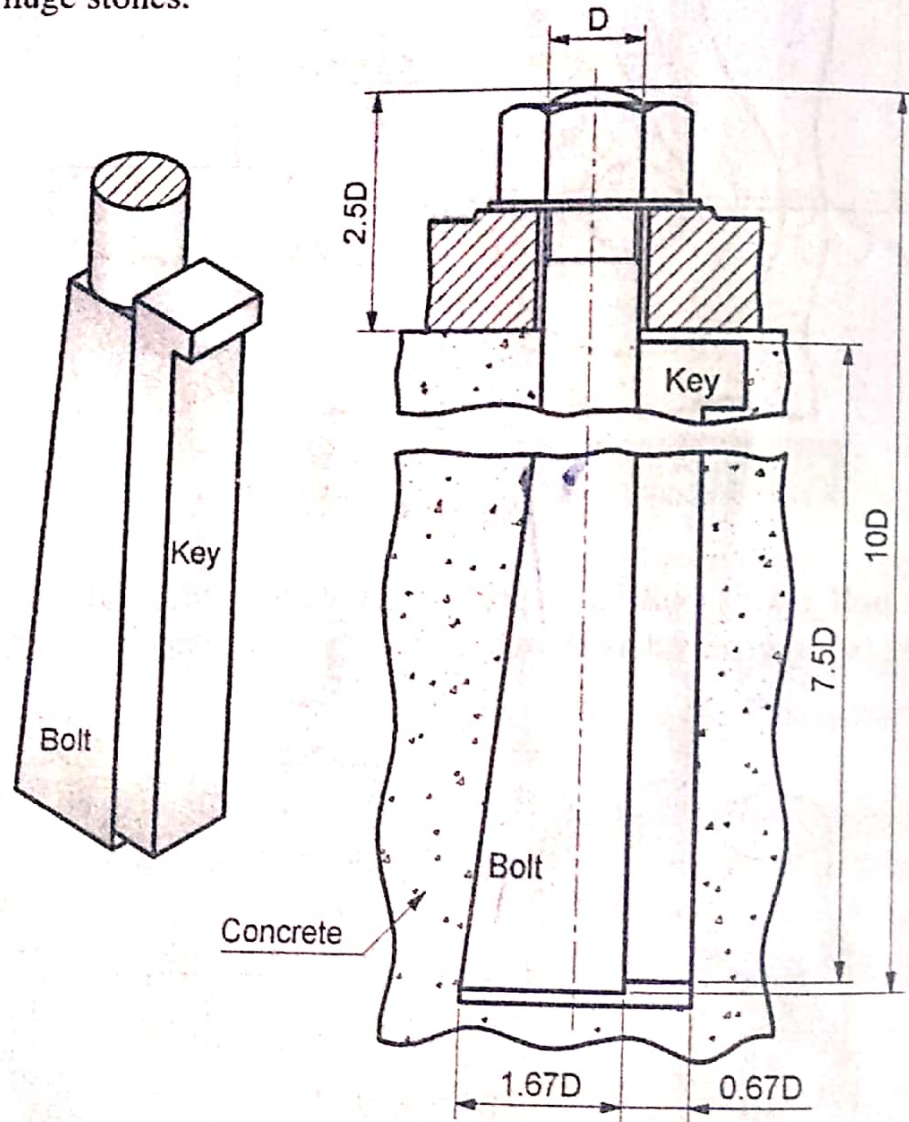


Fig. 2.37

(iv) **Bent (Curved) foundation bolt**

The name of the bolt itself indicates that, it is forged in curved form and set in lead and concrete. When machines are to be placed on stone beds, the bolts are set in lead. Fig. shows a bent foundation bolt that is first set in lead and then in cement concrete, resulting in a firm and stable foundation.

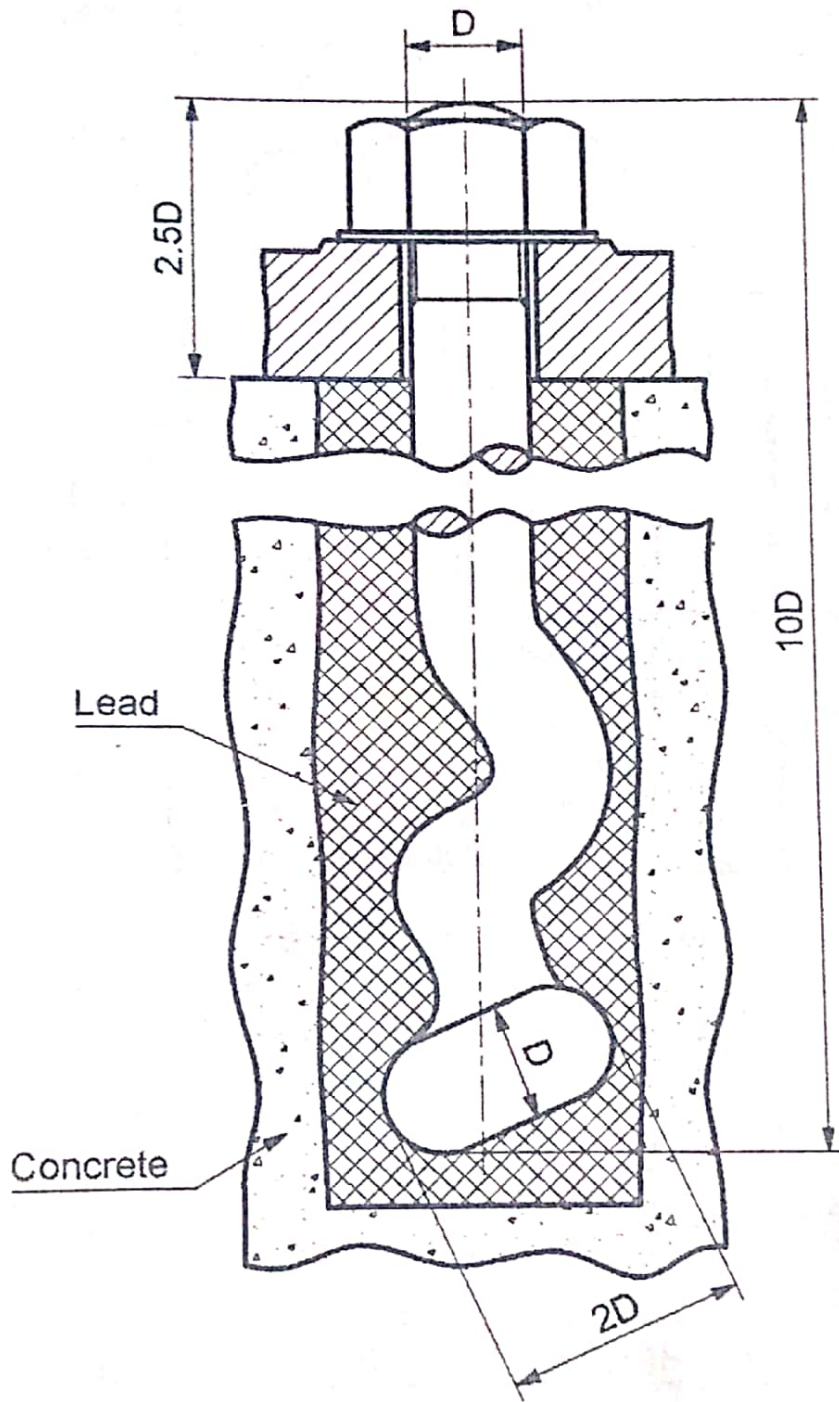


Fig. 2.38

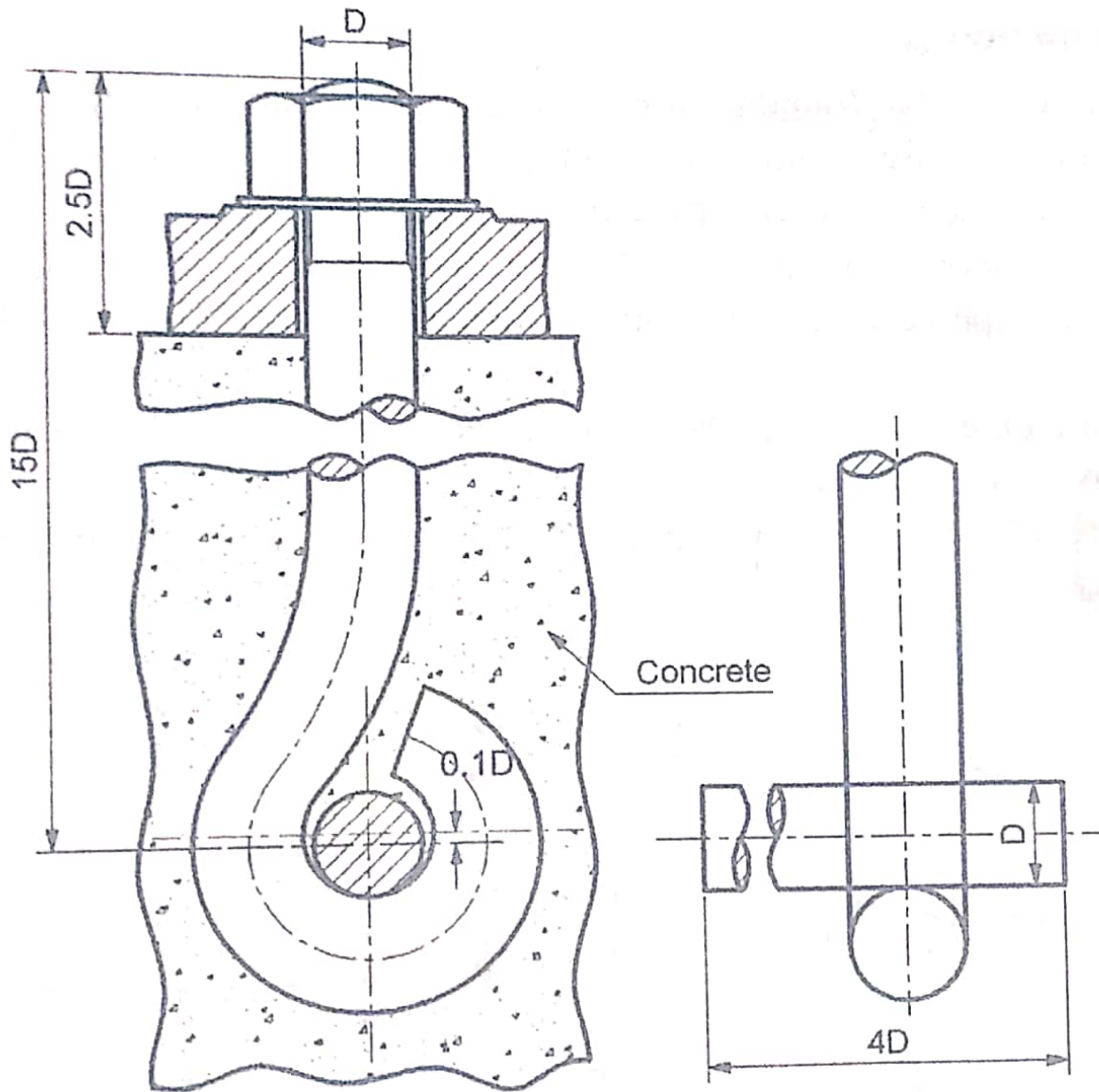


Fig. 2.35

... bolt has tapered body with rectangular or square in cr