

Modified Pusa Bin for use in High Rainfall Coastal Regions

Pusa bin is just like other traditional storage structure and is usually made of mud. To suit high rainfall conditions we have replaced mud bricks with baked bricks or locally available stones like laterite. To make this storage structure moisture proof, a plastic film is used on inner side of the bin. Following is the step by step procedure to make a modified Pusa Bin:

- 1) A platform of bricks/ uniformly cut laterite stones is made.



- 2) On this platform, a sheet of 700 gauge plastic is spread in such a way that it overlaps the platform on all sides by at least 6 cm.
- 3) On the plastic sheet, a layer of 7 cm thick bricks / cut stones is then laid.
- 4) Walls are made of bricks/ stones and these are sealed with mud or cement plaster.



- 5) Now the walls are raised to proper height and a wooden frame is placed on it.
- 6) The upper roof of the structure is made of burnt bricks.

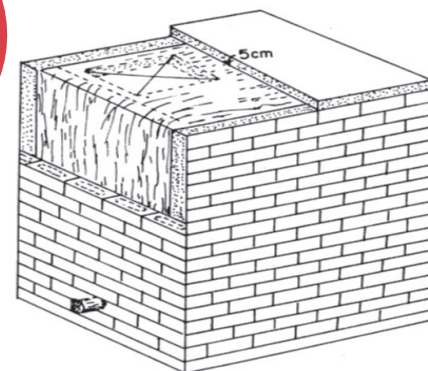


Figure 1: Pusa Bin

- 1) For unloading of grains, an inclined wooden or steel pipe is fixed in such a way that grains may come out of structure by gravity.
- 2) The mouth of pipe is closed by a cover.
- 3) The inside of all the four walls and roof are covered with a plastic sheet.
- 4) On the top, an open space of about 50 cm x 50 cm is left for loading of grains.
- 5) Leaving this open space, the roof is sealed by mud/plaster.
- 6) After the bin is filled with grains, the top open space is well covered by a plastic sheet so that air may not enter the bin.

A typical Pusa bin is shown in Figure 1. The cross section view is given in figure 2. To improve stability of structure under high rainfall conditions of the coastal regions, the mud bricks have been replaced by laterite stones or baked bricks with a cement plaster on outside and inside wall. If the structure is built in an area safe from rain the inner and outer walls can be plastered with mud to cut cost.

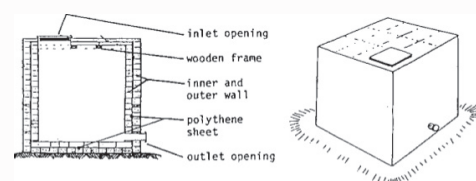


Figure 2: Pusa Bin Cross sectional view
Capacity 0.5-4.0 tonnes LXBXH : 610-1720X610-1520X1360-1600 (mm)

Source : Buholt and Diop, 1987

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