Manufacture of bricks:

The manufacturing of brick, the following operations are involved

1. Preparation of clay

2. Moulding

3. Drying

4. Burning

(i) Preparation of clay :- The preparation of clay involves

following operations

a) Unsoiling :- Top layer of 20cm depth is removed as it contain

impurities.b) Digging: - Clay dug out from ground is spread on level

ground about 60cm to 120cm heaps.

c) Cleaning:-Stones, pebbles, vegetable matter etc removed and

converted into powder form.

d) Weathering:- Clay is exposed to atmosphere from few weeks

to full season.

e) Blending:- Clay is made loose and any ingradient to be added

to it is spread out at top and turning it up and down in vertical

direction.

f) Tempering:- Clay is brought to a proper degree of hardness,

then water is added to clay and whole mass is kneaded or

pressed under the feet of men or cattle for large scale,

tempering is usually done pug mill as shown in the fig 2.1

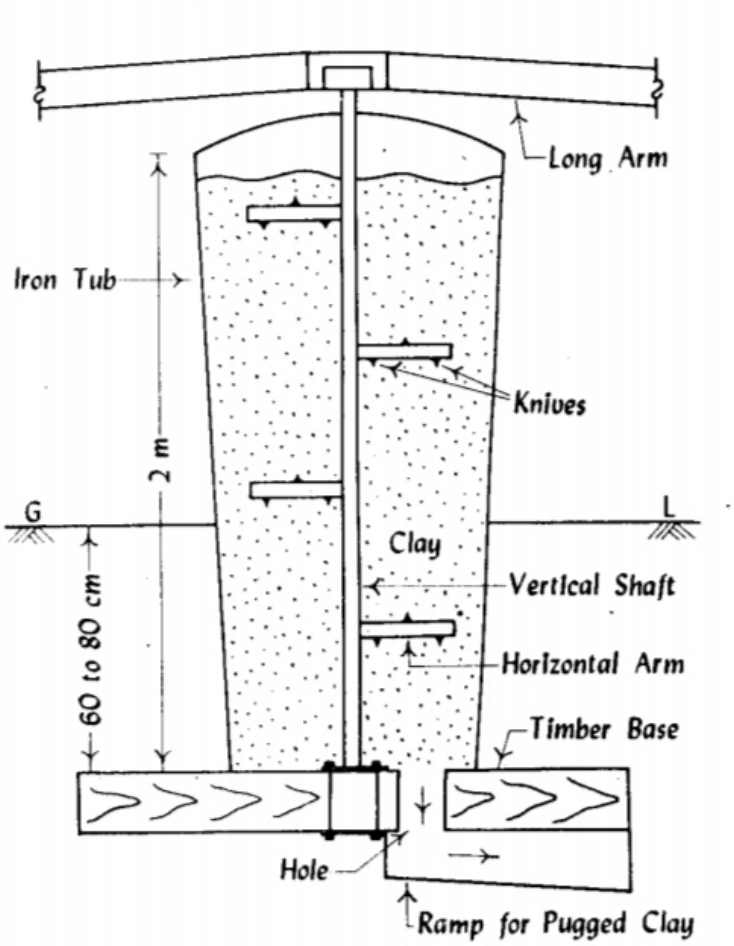

Fig 2.1 Pug Mill

Process:- Clay with water is placed in pug mill from the top. When the vertical staff is rotated by using electric pair, steam or diesel or turned by pair of bullocks. Clay is thoroughly mixed up by the actions of horizontal arms and knives when clay has been sufficiently pugged, hole

at the bottom of tub, is opened cut and the pugged earth is taken out from

ramp for the next operation of moulding.

Moulding: Clay, which is prepared form pug mill, is sent for the next

operation of moulding. Following are the two ways of moulding.

Hand Moulding: Moulds are rectangular boxes of wood or steel, which

are open at top and bottom. Steel moulds are more durable and used for

manufacturing bricks on large scale as shown in fig 2.2. Bricks prepared

by hand moulding are of two types.

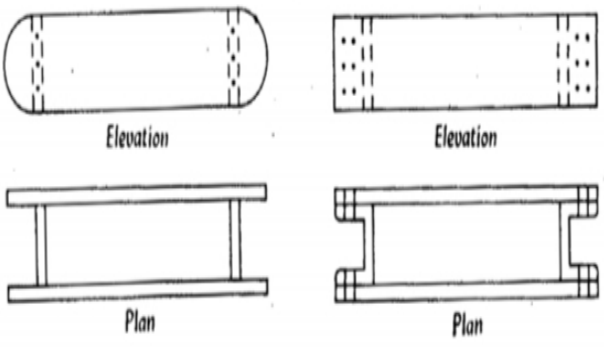

Fig 2.2 Wooden mould & Steel mould

a) Ground moulded bricks

b) Table moulded bricks

(a) Ground moulded bricks: ground is first made level and fine sand is sprinkled over it. Mould is dipped in water and placed over the ground to fill the clay. Extra clay is removed by wooden or metal strike after the mould is filled forced mould is then lifted up and raw brick is left on the ground. Mould is then dipped in water every time lower faces of ground moulded bricks are rough and it is not possible to place frog on such bricks.

Ground moulded bricks of better quality and with frogs on their surface are made by using a pair of pallet boards and a wooden block

(b) Table-moulded bricks: Process of moulding these bricks is just similar to ground bricks on a table of size about 2m x 1m.

(1) Machine moulding: This method proves to be economical when

bricks in huge quantity are to be manufactured at the same spot. It is also helpful for moulding hard and string clay. These machines are broadly classified in two categories

(a) Plastic clay machines

(b) Dry clay machines

a) Plastic clay machines: This machine containing rectangular opening of size equal to length and width of a brick. Pugged clay is placed in the machine and as it comes out through the opening, it is cut into strips by wires fixed in frames, so there bricks are called wire cut bricks.

b) Dry clay machines: In these machines, strong clay is first converted into powder form and then water is added to form a stiff plastic paste.

Such paste is placed in mould and pressed by machine to form hard

and well shaped bricks. These bricks are behavior than ordinary hand

moulded bricks. They carry distinct frogs and exhibit uniform

texture.