

25. RENEWABLE ENERGY ENGINEERING

(i) SINGLE POT CHULHA



The single pot chulha has a double wall with a gap of 2.5 cm. It has a grate at the bottom of the combustion chamber. Legs have been provided in the four corners of the chulha (5 cm height) as the ash can be collected below the grate. The outer wall has two rectangular secondary air openings at the lower portion on both sides for air entry. The inner wall has 1 cm diameter holes which maintain a triangular pitch of approximately 3 cm. The secondary air enters through the rectangular opening in the outer wall gets heated in the annular chamber and while moving up it passes through the holes in the combustion chamber. The preheated air helps in proper burning of the fuel. The efficiency of single pot improved chulha is 24%. The cost of the unit is Rs.350/-.

(ii) DOUBLE POT CHULHA



The TNAU double pot portable chulha (chimneyless) is made with two walls. Around the first pot, an annular chamber having a width of 2.5 cm is left and the outer wall is constructed. The outer wall is also extended to cover the second pot in which case the annular chamber width is 3.5 cm, because of the smaller diameter of the second pot hole. Two secondary air inlets are made, one on the outer wall with rectangular shape (17 cm x 1 cm) near the combustion chamber and the other at the