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Fishermen's ingenuity in utilizing thermocole for making fishing crafts at Satpati (Maharashtra)

The ingenious traditional fishers of Satpati (Maharashtra) designed and fabricated fishing crafts using cheap thermocole (polyurethane).

There are two types of boats, one with thermocole packing material of small sizes and another by using thermocole sheets. (1) The method is very simple and consists of thermocole packing material or wastes stacked into a sack made from synthetic packing sheets and given a shape of floating object, which is flat in shape and narrower at both ends (Fig. 1). It is also supported by the wooden stripes sewed to maintain the flat shape.

The length of the floating objects varies between 2.8-4.6m and the width varies between 0.78-1m. The height of the object is about 22cm. Mainly two persons sit on the floating object during fishing operations. The weight of the craft is about 10-15 kg and the cost is



Fig. 1. Type one craft made from thermocole waste/packing materials

about Rs. 1000.

(2) Thermocole sheets of 15cm thickness are used for bottom and 10 cm for the sides. They are supported by the wooden stripes. The sheets are joined by stitching. The whole structure is covered with thick nylon mesh cloth. The length of the craft is in the range of 3.0-4.25m and the width of 0.6-0.92m. The craft has space for fishing gear as well as fish catch. It also carries two persons during fishing operation.

The weight of the craft is about 10-15 kg and the cost is approximately Rs.4000. The construction/assembling charge is about Rs. 400-500.

There are about 30 such units at Satpati. The dimensions of some these units are given in the Table I. The boats

Table 1 : Particulars of crafts built by thermocole material.

| S.No. | Thermocole sheet | | Thermocole waste material | |
|-------|------------------|-----------|---------------------------|-----------|
| | Length (m) | Width (m) | Length (m) | Width (m) |
| 1 | 3.16 | 0.81 | 2.82 | 0.82 |
| 2 | 3.04 | 0.88 | 3.41 | 0.78 |
| 3 | 3.46 | 0.92 | 4.61 | 0.79 |
| 4 | 3.04 | 0.92 | 3.48 | 0.90 |
| 5 | 3.22 | 0.77 | 2.98 | 0.78 |
| 6 | 4.25 | 0.76 | 3.88 | 0.78 |
| 7 | 4.28 | 0.72 | -- | -- |
| 8 | 3.20 | 0.72 | -- | -- |
| 9 | 3.15 | 0.75 | -- | -- |
| 10 | 2.49 | 0.67 | -- | -- |
| 11 | 2.29 | 0.63 | -- | -- |

are locally built.

Further, improvements and innovations are progressing, where the floor is replaced with plywood to avoid wear and tear to the thermocole sheet (Fig. 2).

The cost of the craft is as follows:

| | |
|----------------------------------|----------|
| 1. Cost of thermocole sheet..... | Rs. 3000 |
| 2. Plywood..... | Rs. 400 |
| 3. Mesh cloth..... | Rs. 350 |
| 4. Bamboo stripes..... | Rs. 200 |
| 5. Threads..... | Rs. 50 |
| 6. Labour charge..... | Rs. 1200 |
| Total | Rs. 5200 |

The gears used are mainly gill net of different dimensions depending upon the target species. Mostly polyethelene monofilament (untwisted), locally called 'tangus' is used for making the nets. The crafts are beach landed and operated in near shore waters. The crafts can withstand both spring as well as high tide currents



Fig. 2. Type two craft made from thermocole sheets.

but needs investigations on its on high wave action areas. This cheap technology would be very useful and cost effective for introduction in lakes, reservoirs and inland waterways. It can also be used as life saving boats.