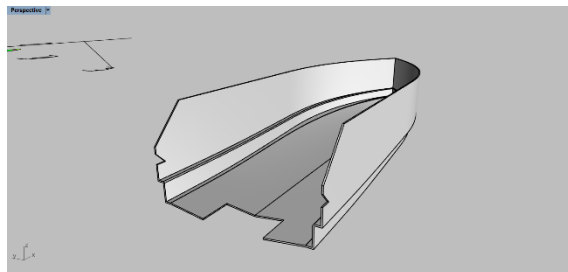


27 feet / 7.60 meter boat calculation :

1. Surface coverage volume (thickness = 2cm) = 646760.99 cm³
2. Density of FRP (Fiber Reinforcement Plastic) = 1.85 gr/cm³
3. Mass total = 1196.5 Kg



Volume & Density to Mass Calculator

Mass Factors	
Volume (V) [?]	646760.99
	cu centimetres (cm³)
Density (ρ) [?]	1.85
	grams (g)
	per (l)
	cu centimetre (cc, cm³)
Calculate Mass	
Mass (m) [?]	1196.50783
	kilograms (kg)

Total weight

1. Fiber structure weight (thickness = 0.4 mm) : 254 Kg
2. Fiber interior moulded weight (thickness : 1mm) : 310 Kg
3. Fiber Transom & side wall (thickness transom & Side wall = 2 cm & 1cm) : 370 Kg
4. Wood Mahogany decking (thickness 1cm, density 0.8gr/cm³) : 80 Kg
5. Accessories, outfitting & safety equipment : 110 Kg
6. Engine (mercury 150hp seapro) : 220 Kg
7. Battery 150 ah @2 pcs : 94 Kg
8. Fuel Tank : 550 Kg (max)
9. Fresh water tank (opt) : 110 Kg (max)

Total : 3294 Kg *20% = 3952 Kg

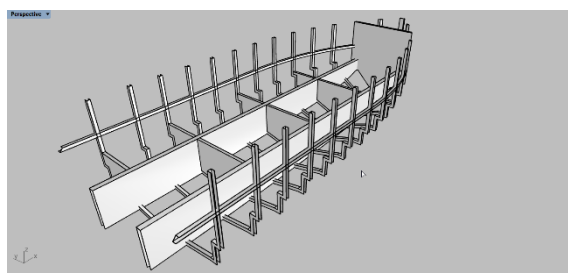


Photo 1

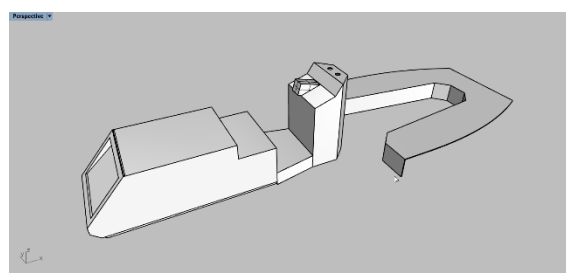


Photo 2

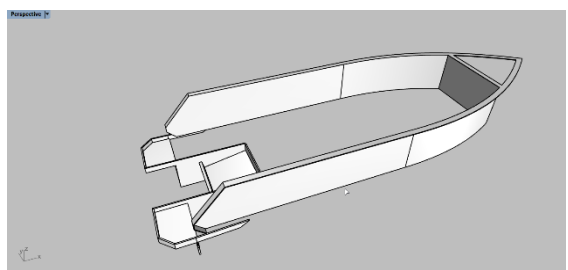


Photo 3

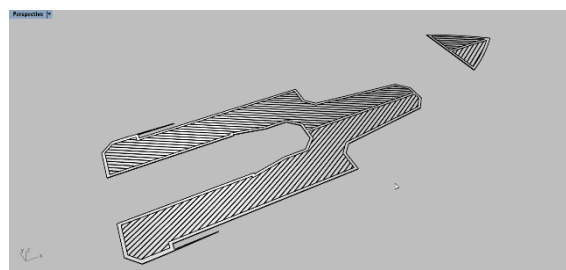


Photo 4

if we make the calculation with online calculator, our boat will be sinking if we load 2.189 Kg (2.2 Tons) onto the boat. Or its about 30 person's weight on board

omni[•] CALCULATOR

Properties of the object

True mass of the object	3952 kg ▾
Density of the object	1.85 g/cm³ ▾
Volume of the object	2.1362 m³ ▾
True weight of the object	38,730 N ▾
Apparent mass of the object	1,762.4 kg ▾
Apparent weight of the object	17,271 N ▾

Properties of the fluid

Fluid type	Sea water ▾
Density of the fluid	1,025 kg/m³ ▾
Volume of the fluid displaced	2.1362 m³ ▾
Mass of the fluid displaced	2,189.6 kg ▾

Result

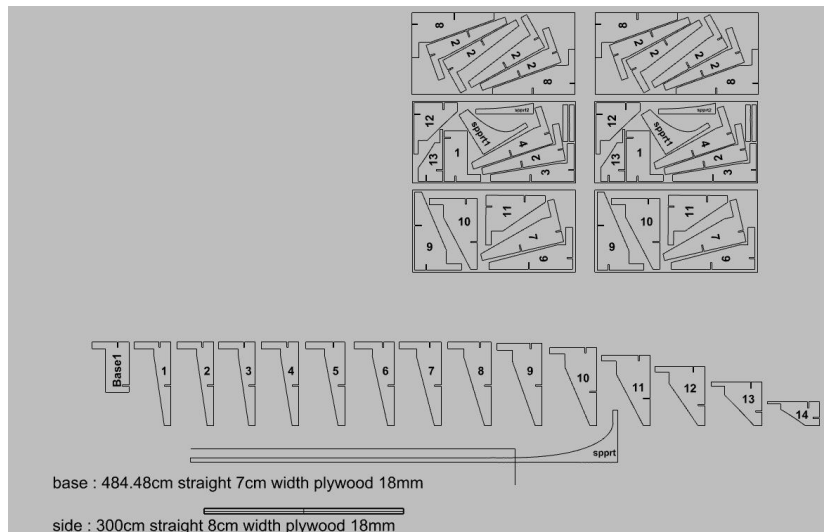
Force of buoyancy	21,458 N ▾
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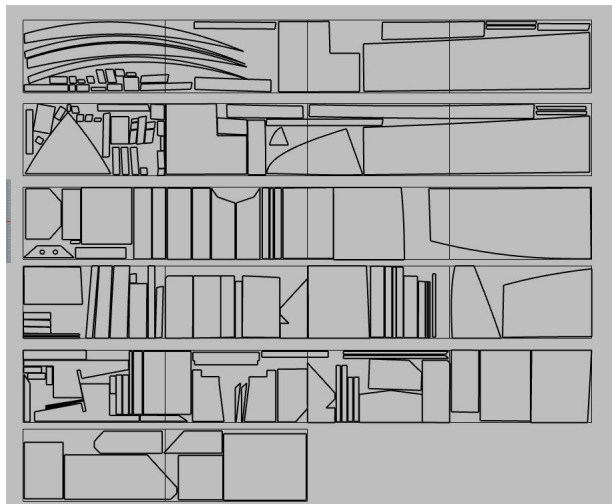
The weight of the fluid displaced by the immersed object is less than the object's weight. The object will sink.

25 ft or 7.6 Meter
Material Calculation

Moulding :



- 6 pcs of 18mm com plywood (base) + 1 pcs for connecting



- 22 pcs of white melamine 2s (if CNC, if no will cost around 28)
- 5 length of white wood (for support)

Fiber (approximate calculation)

- Gelcoat : 1
- Marine Resin : 5 (outside surface only) + full structure add 3
- Mat 450 gr/m² : 8
- Coremat 3mm : 1
- Talcum powder : 1
- Fumed Silica : 1
- Catalyst : 1

Wood :

For structure

- 10 length 2"x12" white wood (full)
- if bulkhead use plywood : 6 pcs