

17. DIFFERENT DESIGNS OF FISHING VESSELS AND SAFETY ASPECTS

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Fishing vessels of different types, sizes and built in different materials are in operation in our country and can be classified into:

1. Artisanal fishing vessels
2. Traditional fishing vessels
3. Motorised vessels
4. Mechanised vessels
5. Multi purpose / Combination fishing vessels

1. Artisanal Fishing:

Small-scale, low-technology, low-capital, low- energy, relatively small fishing vessels, making short fishing trips, close to shore by individual fishers of coastal or island ethnic fishers and mainly for local consumption. In practice, definition varies between countries- dugout canoes and catamaran are shown in the following pictures.



2. Traditional fishing vessel: are in general simple traditional fishing vessels only having the following properties:

- Vessels using traditional methods for fishing
- No deck equipment such as winch is used
- No insulated/cold storage onboard
- No wheel house and accommodation onboard



Traditional Gillnetter-Oar used for fishing-No fuel



Gillnetter using long tail propulsion

3. Motorised Vessels

Vessels using motors for propulsion are included in this category. Examples are: Inboard engine fitted Ring seiners.



Inboard engine fitted ring seiners getting ready for fishing.



Outboard engine fitted ring seiner

Some Ring seiners are larger in size and are fitted with inboard engines for propulsion.



The above photos show the larger class ring seiner with inboard engines and large sized fishing gear. It can be noticed that there is no wheel house as well as deck machinery for gear handling. There is no insulated fish hold and these boats conduct daily fishing only.

4. Mechanised fishing vessels

These are larger vessels mostly venturing for multiday fishing. Uses engine power for cruising and winch for fishing gear handling.

- Uses mechanical/hydraulic/electric power for fishing gear handling
- Has insulated/cold storage/freezer storage onboard
- Accommodation/galley/toilet for multiday fishing
- Communication, life saving, fire control, light and sound signals, etc onboard

Types of mechanized fishing vessels

a) Trawler: Stern trawlers are engaged in commercial fishing in all maritime states of India.



Stern trawler

b) Seiner

- Purse seiner



Commercial Purse Seiner operated in Goa is shown above.

- Tuna purse seiner
- Seine netter

c) Gill netters



Commercial Gill netter from Tamil Nadu is shown above.

d) Dolnetters



Maharashtra Dolnetter is shown here.

e) Liners

- Hand liner
- Long liner
- Pole and liner: Pole and liner vessels are very popular in Lakshadweep islands. Specialties are: Tanks for storing the bait, sufficient deck area for attaching the bait to the hooks and a convenient place for preparing the lines for setting and hauling are typical features for line fishing vessels. Extended aft platform for fishing is fixed in the aft which is typical feature for this vessel. Pole and liner is shown below.



5. Multi purpose / Combination fishing vessels

g) Mother ships, Fishery Research Vessels, Training vessels, Patrolling vessels, Marine Ambulance are also conducting fishery related activities.

Safety of fishing vessels

The safety is to be considered during the design, operation and maintenance of fishing vessels. Most important is to design a safe vessel. Then comes the construction and delivery of a safe vessel. Thirdly it is the operational safety which makes a vessel safe. There are many systems to make fishing vessel safe as given below:

When a vessel meets an accident, sinks or fisherman falls in sea life saving appliances can save the life of the lives in danger.

* Life saving appliances are:

Life jackets, Life buoys, Life rafts, Life boats

In the event of fire onboard a vessel the following appliances are used.

* Fire control appliances

CO₂, Dry chemical powder extinguishers, AFFF

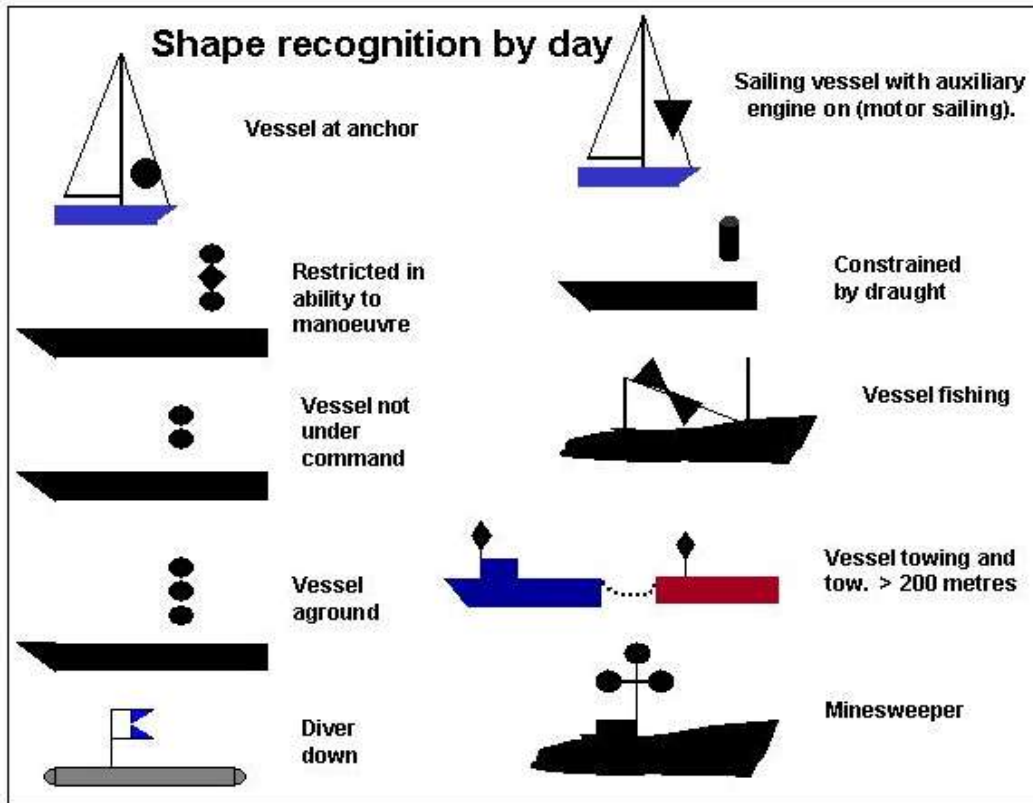
For day and night navigation the following equipments are essential:

* Navigational equipments



GPS, Navigational lights and day signals, AIS


Day and night signals are given in the following page.





FISHING VESSEL

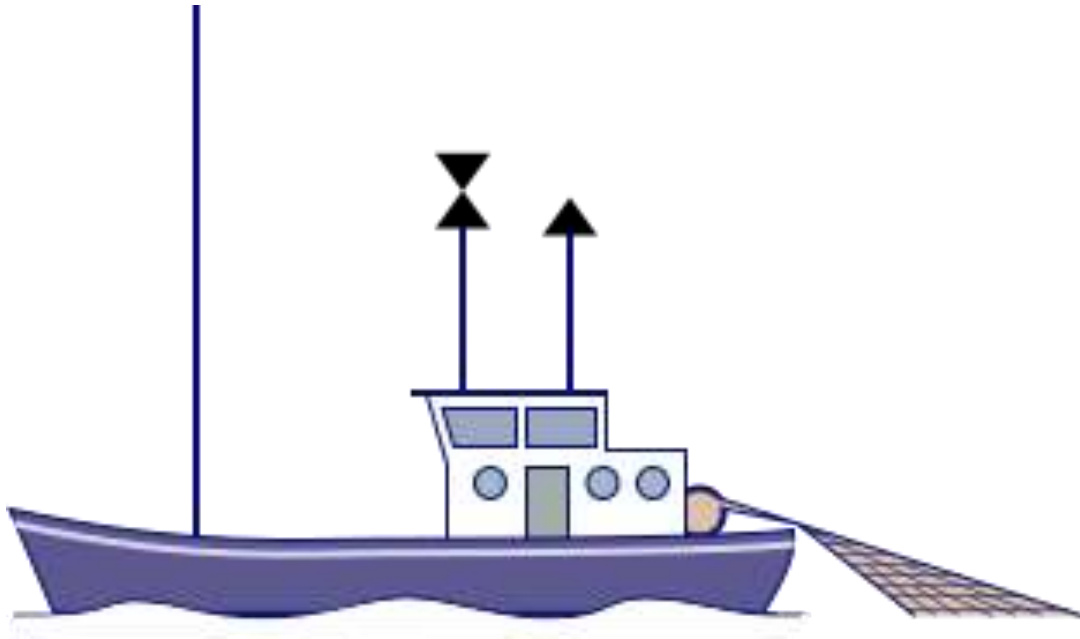





RULE 26 (b) & (c)

A vessel engaged in fishing, shall exhibit:
a shape consisting of two cones with apexes together in a vertical line one above the other;

when there is outlying gear extending more than 150 meters horizontally from the vessel, an all-round white light or a cone apex upwards in the direction of the gear;



Finally safe maintenance procedures are to be followed for long life and safety of fishers and vessel. The propulsion, steering area where the shafts projects out of hull to sea water, the bilge suction areas are to be inspected periodically for leaks and damages. The corrosion and damages to the under water areas are to be repaired to avoid casualties. Maintenance of watertight doors and hatch ways are to be ensured.
