

### Sea Anchors used in South-East of Coast of Tamil Nadu

Kalaiarasan Muthupandi<sup>1</sup>, R. Vinothkumar<sup>2</sup>, V. Naganandhini<sup>3</sup>, K. Vasanth<sup>3</sup>, V. Lakshme Gayathre<sup>3</sup> and V. Durai<sup>4</sup>

<sup>1</sup>Assistant Professor, TNJFU – Directorate of Incubation and Vocational Training in Fisheries, Ariyaman Beach, Ramanathapuram

<sup>2</sup>Scientist, ICAR – Central Marine Fisheries Research Institute, Mandapam, Ramanathapuram

<sup>3</sup>P.G. Scholar TNJFU – Directorate of Incubation and Vocational Training in Fisheries, Ariyaman Beach, Ramanathapuram

<sup>4</sup>Assistant Professor, TNJFU – Dr.M.G.R. Fisheries College and Research Institute, Thalainayeru, Nagapattinam

#### SUMMARY

The sea anchors have been operated along the coastal region of Nagapattinam, Kanyakumari and Thoothukudi districts. There are two type of sea anchors normally they are using such as 9 fathoms diam. and 12 fathoms diameter. It is mostly used for Deep Sea gill netter cum long liner fishing vessels. It is made of rayon and nylon materials; which is used to keep the boats head into the wind and the sea. This innovative type of sea anchor is used among the deep sea fishermen in order to reduce the drift and to minimize the fuel consumption and also reduced the fishing cost of motorized and mechanized Deep Sea fishing vessels.

#### INTRODUCTION

Sea anchor is a parachute type device which is used to stabilize the vessel and to limit progress through the water. This sea anchor is operated along the regions of Nagapattinam, Kanyakumari and Thoothukudi coastal regions. Here the fishermen construct these anchors by themselves based on the vessel size and design. They are tied to the bow side of the vessel and allowed to drift. The fishermen use these anchors for deep sea fishing. They are commonly used by gillnetters and long liners. They are based on the principle of hydrodynamic drag thus preventing the movement of the vessel towards the current in the open sea.

#### Sea Anchor

Sea Anchor which is a parachute shaped portion, fabricated mostly by rayon material which is used to keep drifting the vessels and head towards the wind and waves to make comfortable venture even in a rough condition of the sea. Fishermen regularly use sea anchors in order to reduce the drifting. Two types of sea anchors are used in and around the coastal region of Nagapattinam, Thoothukudi and Kanyakumari districts. The sea anchor is made of rayon or nylon material and it is roped with 10 mm bolts rope at the sea. The 12 legged bridles are attached to it. A hawser, usually mm (3 inches) size rope is shackled onto the bridle. The length of the hawser is normally three times the length of boat. A tripping line of 12mm size rope is attached to the rear end of the sea anchor. The tripping line is normally 2 fathoms longer than the hawser. The rear end of the mouth of the anchor is usually in diameter 5 or 6 ft and front end is 9 or 11 fathoms and the length of the sea anchor are 5 or 7 metres.

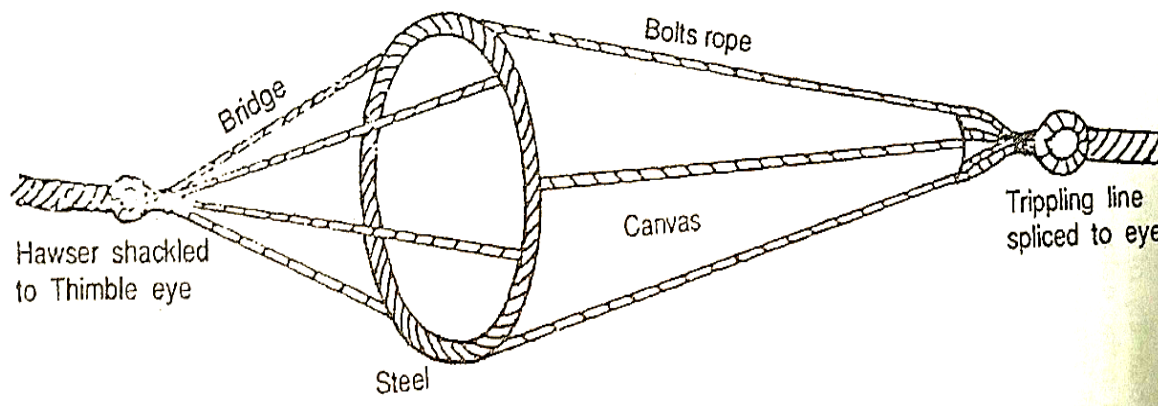


Fig.1. Sea anchor

#### Sea Anchor Applications

- It is also used during storm and emergency time.

- By using sea anchors multiday fishers can reduce the fuel consumption, provides comfortable and stable ride.
- During rough sea condition (Storm), to avoid menace of broaching of fishing vessels
- It is act as drift controller and retains the vessels in the fishing ground itself
- It is mostly used for kite fishing and improves the fishing the practice
- It is used in emergency period during engine power loss and act as emergency steering
- It aids the disabled vessels and also easy to identify the disabled vessels from their last reported position.

### Descriptions

The Sea Anchor is made up of high-density rayon, brightly coloured for safety in an air search. The following specification generally used by multiday gillnetters from Nagapattinam coast.

Sl. No.	Particulars	Type I	Type II
1.	Material	Nylon	Rayon
2.	Total length	5 m	7 m
3.	Top width	9 fathoms	12 fathoms
4.	Bottom width	4 ft	5 ft
5.	Length of upper panel	1 m	2 m
6.	Length of middle panel	2 m	2.5 m
7.	Length of bottom panel	2 m	2.5 m
8.	Top opening	9 fathoms	11 fathoms
9.	Bottom opening	5 ft	6 ft
10.	Length of bolts rope	7 m	9 m
11.	Number of bolts rope	12	14
12.	Material of bolts rope	Polypropylene (PP)	Polypropylene (PP)
13.	Thickness of bolts rope	8 mm dia.	8 mm dia.
14.	Top panel – Length between two brail lines	0.15 ft	0.15 ft
15.	Middle panel – Length between two brail lines	1 ft	1 ft
16.	Bottom panel – Length between two brail lines	4.5 fathoms	4.5 fathoms
17.	Top bridle	2 ft	2ft
18.	Bottom bridle	5 fathoms	5 fathoms
19.	Holding or dragging line	50 fathoms	50 fathoms
20.	Material of ring	Iron	Iron
21.	Material of swivel	Stainless steel	Stainless steel
22.	Material of float line	PP	PP
23.	Thickness of float line	10 mm dia.	10 mm dia.
24.	Material of primary float	HDPE	HDPE
25.	Size of primary float	12 cm dia.	14 cm dia.
26.	Material of recovery float	HDPE	HDPE
27.	Size of recovery float	14 cm dia.	18 cm dia.

### Operation of Sea Anchor

- Secure items on board
- Head into the weather to "stall" the boat
- Toss the trip line, float line and Sea Anchor into the water on the windward side of the boat, followed by the rode
- Drift back on the Sea Anchor, paying out the required scope

- Make fast the rode and employ chafe gear
- Secure the rudder amidships
- Secure the boat and get some rest.



1. Front end mouth opening



2. Rear end mouth opening



3. Hawser shackles



4. Deployment of sea anchor

Fig.2. Operation of sea anchor

### CONCLUSION

This innovative type of sea anchor is used among the deep sea fishermen in order to reduce the drift and to minimize the fuel consumption. This anchor comes into action when heavy weight anchors are difficult to operate at deep sea as the rope length is insufficient. Their construction cost is low and easily stowed in the vessel.

### REFERENCES

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