Square mesh windows

Square mesh windows can be installed by firmly attaching a piece of square mesh netting panel of appropriate dimensions, on the upper part or on the sides of diamond mesh codends or on the hind belly (Fig. 4).

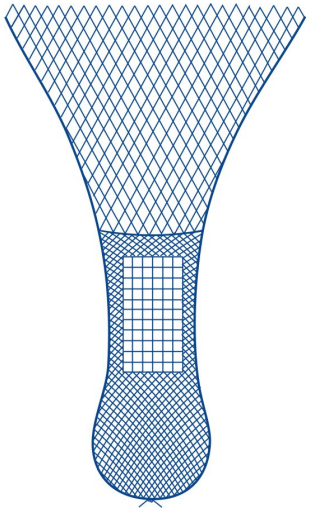

Fig. 4: Square mesh windows installed on codend

Small sized bycatch species and juveniles can escape through the window as the square meshes in the panel remain open when the trawl is under tow.

For further information please contact:

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Fish for all

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Square Mesh Trawl Codend and Windows

Fabrication and Advantages

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Introduction

An important milestone in the marine fishing industry was the introduction and commercialisation of trawl nets. Trawl nets are used in the surface, midwater or bottom of the sea depending on the habitat of fishes. In India, most of the mechanised trawlers are using bottom trawl nets.

Trawl nets are conical bag nets with wings in the front part, square and belly in the middle and codend at the tail end. The fishes trapped in the trawl net are collected in the codend during trawling and they are released from the codend after the net is taken back to the deck with the help of a winch.

Generally codend with diamond meshes are used in trawls (Fig.1). To avoid the catch of small fishes and juveniles, the Kerala Marine Fishing Regulation Act (KMFR Act) has stipulated that the mesh size in the diamond mesh codend should not be less than 35 mm. Square mesh codends are more ecofriendly and fuel efficient than the diamond mesh codends (Fig. 2)

Demerits of diamond mesh codends

In diamond mesh codends, the mesh lumen tend to close under tension during trawling and hence small fishes and juveniles are unable to escape through the meshes. As the water flow is restricted due to closure of the mesh lumen during fishing, the drag of the net increases which results in increased fuel consumption.

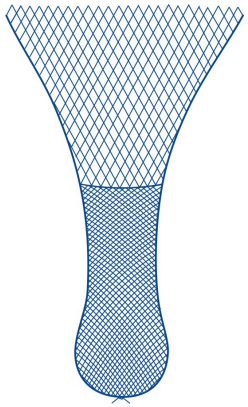

Fig. 1: Diamond mesh codend

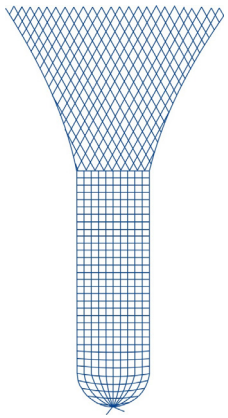

Fig. 2: Square mesh codend

Advantages of square mesh codends

As the meshes in the square mesh codends remain open under tension during trawling, water flow will not be restricted and filtration will be efficient and resultant drag will be comparatively less which minimizes fuel consumption. As the mesh lumen remains open, it is easy for small fishes and juveniles to escape through the meshes which reduces the quantum of bycatch enabling the conservation of aquatic resources. In addition to these benefits, the quantity of net required for fabricating square mesh codend is less than the requirement for diamond mesh codend of the same dimensions, resulting in lower fabrication costs. As per the recommendations from CIFT, Gujarat Marine Fishing Regulation Act (GMFR Act-2003) has prescribed the use of 40 mm square mesh codends in the trawl nets.

Preparation of square mesh netting

Square mesh netting is prepared from machine made diamond mesh netting by bar cuts (Fig. 3) and strengthened by marling to prevent unravelling of the mesh. The balance netting pieces can be joined together and used for producing square mesh netting.

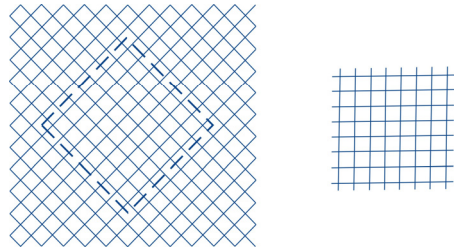

Fig. 3: Preparation of square mesh window panels