

Tailoring/cutting of webbing

In certain types of fishing gears, the webbing has to be tailored considerably to acquire the required shape of net especially in trawls, seines etc. Braiding is not feasible when large scale manufacture of nets is needed as it is time consuming as well as uneconomical. In this case, machine made webbings are cut to required shape with minimum wastage. To accomplish this, proper methods of cutting are to be followed.

Methods of tailoring

Point – Bar system: Each mesh consists of four bars (legs) and four points (knots). There are two ways of cutting a mesh.

- Point cut: Cutting of 2 legs in each knot. All point cut gives a right angle webbing
- Bar cut: Cutting of only one leg at each knot. This results in a right angled triangular piece where the two sides are equal.

Tailoring rates:

Varying degrees of taper in the webbing is brought about by a combination of point and bar cuts. If 'N' is the number of meshes at the base and 'L' the number of meshes in height of a triangular webbing, the number of points (P) to be cut is (L-N). The number of bars (B) to be cut is always (2N) irrespective of whether point cut is included or not. Therefore to have a triangular webbing having 'N' meshes at base and 'L' meshes in height the calculation is as follows:

$$P/B = \frac{L - N}{2N} \quad \text{For tapering on both sides of the webbing}$$

$$P/B = \frac{L - N}{2N} \quad \text{For tapering on only one side of the webbing}$$

Where,

P - point cut

B - bar cut

L is the number of meshes in the depth of the webbing

N is the number of meshes in the longer side of the triangle

Mounting of webbing

Expected learning out-come

- Hanging coefficient and take up ratio calculations
- Methods of net mounting –Reeving and stapling and Norselling

Introduction

The process of hanging the webbing to the main lines like head rope and foot rope is known as mounting. Actual shape of a mesh or netting panel is determined by the process of hanging. While hanging one should apply proper hanging coefficient to get required horizontal opening of the mesh and proper shape to the net. The shape and looseness of netting depends on the hanging coefficient. The hanging ratio is defined as the length of the frame/head rope to the stretched length of netting and it is expressed in terms of decimal, percentage and vulgar fraction. The hanging ratio is also expressed by another term, hang-in or take up ratio. This refers to the amount of excess webbing expressed as percentage of total length. The hanging coefficient varies from net to net and in some cases it varies in different parts of the same net itself

Methods of mounting

Reeving – This is the method where all the end meshes are passed through the main line to which the webbing is to be hung. These meshes are either fixed individually or after few meshes at the required distance at regular intervals the uniform distribution of these meshes along the main line is again depends on the hanging coefficient.

Stapling – This method of mounting is widely used in commercial fishing. In this method, a stapling line (a thicker twine) is hitched to the head line near one end. The end of the mounting twine is tied to the main line or head rope by rolling hitch with first mesh. The mounted line (staple line) is then passed through particular number of meshes and hitched on to the main line at regular intervals by means of clove hitch. This is continued till the other end of the netting where it is stapled with the main line by rolling hitch. The number of meshes taken and the distance between each staple depend upon the hanging coefficient.

Norselling – This is a method of mounting in which the hanging line is attached to the head line by means of short pieces of twine or line called as Norsel.

Setting – It is the method of spreading or spacing the meshes of the netting on the head line to give a definite degree of openness to the meshes.

Rigging - Rigging is the process of fitting the necessary ropes and accessories so as to make a net ready for fishing. Rigging affects the efficiency of a gear. A well constructed net may give unsatisfactory results due to defective rigging. All auxiliary components like ropes, floats, sinkers etc should be of the right type and fitted in the correct position so that the net acquires required shape during its operation.