

Tuna Purse Seine Form

Instructions

Last modification: September 9, 2009

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Introduction

The Tuna Purse Seine Form was created in September, 2009 to collect information on the characteristics of purse seine nets used in the tuna purse seine fishery.

DATA COLLECTION INSTRUCTIONS

Data is recorded by filling in the supplied spaces with information and marking the appropriate options presented on the form. All measurements should be recorded in the unit indicated on the form. If the data is supplied in a different unit, use the conversion formulas supplied in the appendix to convert to the indicated unit. Information about the net construction is taken from 9 sections, dividing the net into horizontal thirds and vertical thirds. Refer to the diagram in the appendix for a detailed reference to these sections.

Data fields

Vessel name The name of the vessel.

Registration The official vessel identification.

Date The date that the information is collected.

Location The name of the port where the information is collected.

Recorded by The name of the person collecting the information.

General Information

Dimensions

Total length: The total length of the net in fathoms.

Maximum depth: The maximum depth of the net in fathoms and number of strips.

Net webbing: The type of net webbing construction. Indicate whether the net is made from twine tied in knots, or with strands of net material woven together (intertwined). If a different type of net construction is used, mark 'Other' and describe the net construction.

Dolphin Safety Panel (DSP)

Length: The total length of the Dolphin Safety Panel in fathoms. If there is no DSP, record zero.

Max. depth: The maximum depth of the DSP in fathoms and number of strips.

Net mesh stretched: Record the stretched length of a single mesh, in inches, as shown in the figure titled 'Net stretched net size' in the appendix. The stretched length should be measured from the center of one knot to the center of the next. If there is more than one stretched length in this section of the net, use the predominant stretched mesh size.

Hanging ratio: Record the ratio of the stretched mesh length to a corresponding length of float line as shown in the figure titled 'Net hanging ratio' in the appendix. This figure provides a detailed description and instructions for calculating the hanging ratio. If the section of net is made up of different hanging ratios, use the predominant hanging ratio.

Double cork line percent: A double cork line refers to the method of attaching each cork individually to the float line. By contrast, the standard method is to pass the float line through each cork. See the figure titled 'Double cork line' in the appendix for a detailed description of each method. Estimate the percentage of double cork line in this section of the net. If no double cork line is installed, record zero percent.

Float diameter: Mark the diameter of the floatline corks, in inches. If more than one diameter cork is used, indicate the diameter of the predominant type of cork.

Twine No.: Net twine is graded by a number which corresponds to its thickness. This measurement is generally between 24 and 100. Mark the number of the net twine used in to construct the DSP. If more than one thickness of net twine is used, mark the number of the predominant net twine.

Sack area

Float diameter: Mark the diameter of the floatline corks, in inches. If more than one diameter cork is used, indicate the diameter of the predominant type of cork.

Twine No.: Mark the number of the net twine used to construct the sack. If more than one thickness of net twine is used, mark the number of the predominant net twine.

Net mesh stretched: Record the stretched length of a single mesh, in inches, as shown in the figure titled 'Net stretched net size' in the appendix. If there is more than one stretched length in the sack area, use the predominant stretched mesh size.

Hanging ratio: Record the ratio of the stretched mesh length to a corresponding length of float line as shown in the figure titled 'Net hanging ratio' in the appendix. This figure provides a detailed description and instructions for calculating the hanging ratio. If the sack area is made up of different hanging ratios, use the predominant hanging ratio.

Sack with double mesh: If the sack is made with an additional layer of net material to increase its strength, mark the 'Yes' box. If there is only a single layer, mark 'No'.

Net Area Information

Upper section

The upper third of the net is further divided into three horizontal sections: the section closest to the stern, the center section, and the section closest to the bow. Information is collected separately for each of the 3 sections.

Float diameter: Mark the diameter of the floatline corks, in inches. If more than one diameter cork is used, indicate the diameter of the predominant type of cork.

Twine No.: Mark the number of the net twine used to construct the section. If more than one thickness of net twine is used, mark the number of the predominant net twine.

Net mesh stretched: Record the stretched length of a single mesh, in inches, as shown in the figure titled 'Net stretched net size' in the appendix. If there is more than one stretched length in the section, use the predominant stretched mesh size.

Hanging ratio: Record the ratio of the stretched mesh length to a corresponding length of float line as shown in the figure titled 'Net hanging ratio' in the appendix. This figure provides a detailed description and instructions for calculating the hanging ratio. If the section is made up of different hanging ratios, use the predominant hanging ratio.

Center and Lower sections

In the same manner as the upper section, the center and lower thirds of the net are divided horizontally into 3 sections: the section closest to the stern, the center section, and the section closest to the bow. Information is collected separately for each of the 3 sections.

Twine No.: Mark the number of the net twine used to construct the section. If more than one thickness of net twine is used, mark the number of the predominant net twine.

Net mesh stretched: Record the stretched length of a single mesh, in inches, as shown in the figure titled 'Net stretched net size' in the appendix. If there is more than one stretched length in the section, use the predominant stretched mesh size.

Lead Line

Chain line

Diameter: Mark the diameter, in inches, of the metal rod used to make a link in the chain. If different sized chains are used in this section, mark the diameter of the predominant chain. Refer to the sketch of the chain link for the correct measurement of the diameter.

Rings

The purse cable passes through the rings at the bottom of the net. Mark the best option to describe the type of ring:

Solid: A solid ring is made of a metal bar formed into a circle and welded together where the ends join, forming a solid ring.

Snap: A snap ring is made with a metal bar formed into a 'C'. The open side of the ring is fitted with a spring loaded section which can open and close, allowing the ring to be removed from the purse cable.

Other: Any other type of ring. Describe the ring in the space provided.

Total number: Record the total number of rings used in the net.

Weight: Record the weight of a single ring, in kilograms. If different sizes or weights of rings are used, record the predominant weight.

Pursing cable

Diameter: Record the diameter, in inches, of the purse cable. If more than one diameter purse cable is used, record the diameter of the predominant purse cable.

Bridle chain

Bridle chains are attached to the chain line at specified distances. A single purse cable ring is attached to each bridle chain, and the purse cable passes through these rings. The bridle chain forms a triangle whose base is the chain line and whose apex holds a ring. Refer to the figure titled 'Bridle chain' in the appendix for more detail.

Measurement A: This is the length, in fathoms, of one side of the triangle formed by the bridle chain, where the base of the triangle is the chain line. Refer to the figure titled 'Bridle chain' in the appendix for more detail.

Measurement B: This is the length, in fathoms, between the two points of attachment of the bridle chain to the chain line. Refer to the figure titled 'Bridle chain' in the appendix for more detail.

Bridle chain diameter: Mark the diameter, in inches, of the metal rod used to make a link in the bridle chain. If different sized bridle chains are used in this section, mark the diameter of the predominant chain.

Other

Experimental equipment installed

Select the best option:

None: The net does not have any experimental equipment installed.

Sorting grid: The net has a sorting grid, usually installed in the sack, which permits small fish to escape alive.

Other: If this option is used, provide a detailed description of the experimental equipment installed in the net.

Comments

Record any other additional information related to the purse seine net.

Appendices

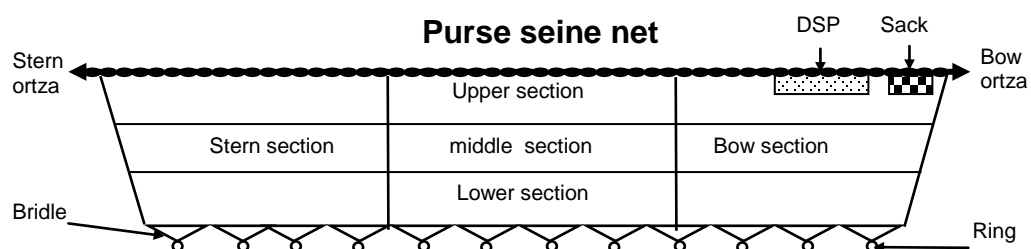
Conversion factors

From inches to meters:	$m = in * 0.0254$
From feet to meters:	$m = ft * 0.3048$
From meters to fathoms	$fath = m * 0.5468$
From feet to fathoms	$fath = ft * 0.1666$
From inches to millimeters	$mm = in * 25.4$
From kilometers to nautical miles	$NM = km * 0.5399$

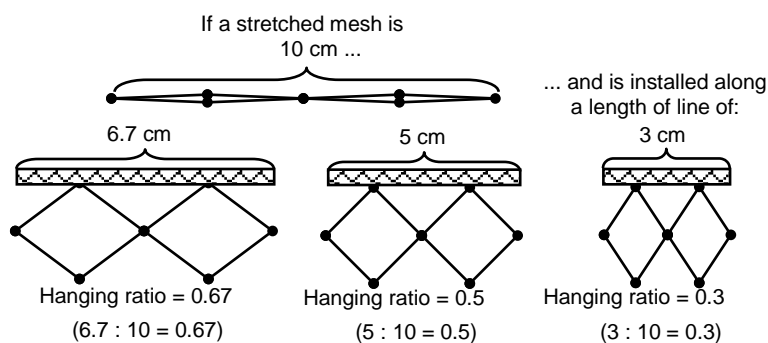
Formulas

Calculation for the encirclement area of the net: $Area = \frac{(Net\ length)^2}{12.566737}$

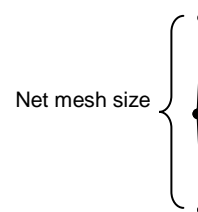
Diagrams



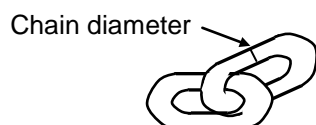
Net hanging ratio



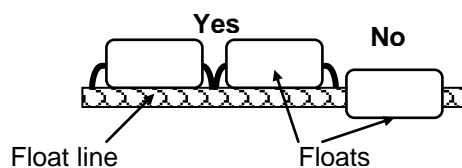
Net stretched mesh size



Chain line



Double cork line



Bridle chain

