

118 FEB 1958

Rpt. C.11 (Comp.).

Index No. 47533
(For London Office only)

LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name "YSW 220"	Official Number Naval Ship	Nationality and Port of Registry Canadian Not registered	Gross Tonnage 112.33 116	Date of Build 1957	Port of Survey Victoria, B.C.
100' BP (fore side stem to C.L. rudder stock) Moulded Dimensions: Length 98'-9" Breadth 18'-0" Depth 7'-9" FBD LENGTH = 103.54 x .96 = 99.40 Moulded displacement at moulded draught = 85 per cent. of moulded depth 271 tons (excluding bossing) (6.5875 Ft.) Coefficient of fineness for use with Tables 795 at 6'-2 1/2" mid. draught					Date of Survey 6th November, 1957 Surveyor's Signature <i>[Signature]</i> Particulars of Classification *100A1 for Government Service on West Coast of Canada.

DEPTH FOR FREEBOARD (D). Moulded depth 7'-9" ... 7'.75 Stringer plate 1/4"021 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 7'.771	DEPTH CORRECTION. (a) Where D is greater than Table depth (D-Table depth) R = (7.77-6.63) .764 = +.87 (b) Where D is less than Table depth (if allowed) (Table depth-D) R = If restricted by superstructures	ROUND OF BEAM CORRECTION. Moulded Breadth (B) 18'.0 Standard Round of Beam = $\frac{B \times 12}{50} =$ 4".32 Ship's Round of Beam = 5" Difference +1.68 Restricted to Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) =$ -17
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	-	-	-	-	-
" overhang ...	-	-	-	-	-
R.Q.D. enclosed ...	-	-	-	-	-
" overhang ...	-	-	-	-	-
Bridge enclosed ...	-	-	-	-	-
" overhang aft ...	-	-	-	-	-
" overhang forward ...	-	-	-	-	-
F'cle enclosed ...	-	-	-	-	-
" overhang ...	-	-	-	-	-
Deckhouse aftDeckhouse... 22'-9"	22'-9"	-	7'-2"	-	-
" forward ...	-	-	-	-	-
Tonnage opening aft ...	-	-	-	-	-
" " forward ...	-	-	-	-	-
Total ...	-	-	-	-	-

Standard Height of Superstructure _____
" " R.Q.D. _____
Deduction for complete superstructure _____
Percentage covered $\frac{S}{L} =$ _____
" " $\frac{S_1}{L} =$ _____
" " $\frac{E}{L} =$ _____
Percentage from Table, Line A.
(corrected for absence of forecastle (if required))
Percentage from Table, Line B.
(corrected for absence of forecastle (if required))
Interpolation for bridge less than .2L (if required)
Deduction = _____

SHEER CORRECTION.

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product
A.P. ...	19.94	1	19.94	7"	7.00	1	7.00
1/4 L from A.P. ...	8.87	4	35.48	2-1/2"	2.50	4	10.00
1/4 L " ...	2.19	2	4.38	1"	1.00	2	2.00
Amidships ...	0	4	0	0	0	4	0
1/4 L from F.P. ...	4.39	2	8.78	1"	1.00	2	2.00
1/4 L " ...	17.75	4	71.00	4-1/2"	4.50	4	18.00
F.P. ...	39.88	1	39.88	13"	13.00	1	13.00
Total ...	-	-	179.46	-	-	-	52.00

Mean actual sheer aft = **deficient**
Mean standard sheer aft =
Mean actual sheer forward = **deficient**
Mean standard sheer forward =
Length of enclosed superstructure forward of amidships = _____
" " aft of " = _____

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75-S}{2L} \right) = \frac{127.46}{18} \times .75 = +5.31$
If limited on account of midship superstructure. If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = 7.77 Summer freeboard = 1.54 Moulded draught (d) = 6.23 Keel allowance = Extreme draught = Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = $\frac{6.23}{4} = 1.56$ Addition for Winter North Atlantic Freeboard (if required) = $\frac{1}{2}$ "	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta = 255$ Tons per inch immersion at summer load water line $T = 3.95$ Deduction = $\frac{\Delta}{40 T}$ inches = $\frac{255}{40 \times 3.95} = 1.61 = 1 \frac{1}{2}$ "	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{9.94 + 1.49}{1.36} = \frac{11.43}{1.36} = 8.40$ Depth Correction87 Deduction for superstructures ... 5.31 Sheer correction17 Round of Beam correction17 Correction for Thickness of Deck amidships ... Other corrections, scantlings, etc. ... Summer Freeboard = 18.49
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc ...	Tropical Fresh Water Freeboard ...
Fresh Water Line " " ... 1 1/2	Fresh Water " " ... 1-5
Tropical Line " " ... 1 1/2	Tropical " " ... 1-5
Winter Line below " " ... 1 1/2	Winter " " ... 1-8
Winter North Atlantic Line " " ...	Winter North Atlantic " " ...

A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.

This YSW Type Water Boat is building to Class for the Royal Canadian Navy. Three similar hulls adapted to carry ammunition in two holds were built to Class recently YSF 216 by Yarrows Ltd.:Victoria, YSF 217 and YSF 218 by Allied Builders Ltd., Vancouver, B.C. and Sister Ships have been built in Eastern Canada.

<u>Moulded Draught</u>	<u>Displacement</u>	<u>Tons per inch</u>
6'-7" (85% moulded depth)	271	3.96
6'-2-1/2"	252	3.95
5'-6"	219	3.87

Copy of Yarrows Ltd. Dwg. No. 8 Hydrostatic Curves attached to C11 Rpt. (Comp) on "YSF 216" dated 14th January, 1957.

Trade of ship Water Boat for Royal Canadian Navy, for Service on West Coast of Canada

Names of ^{similar} ~~sister~~ ships 46734 46735 46955 "YSF 216", "YSF 217", "YSF 218".

Builder's name and yard number Victoria Machinery Depot Co. Ltd., Victoria, B.C. Hull No. 60 ^{-E.B.}

Owners Department of National Defence, Naval Service.

Fee \$45.00
Expenses 30.00 ²⁹⁸



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