

# SINGLE SCREW TUG. STEEL STEAMER OR MOTORSHIP.

5001 1740

Received at London Office

State if Report has been sent on the Freeboard of the Vessel Yco.State if Report is sent on the Machinery of the Vessel Yco.Date of completion of report 2-10-46 Port of ABERDEEN No. ABN RPT 21956Survey held at ABERDEEN Date First Survey 20th Aug 1945 Last Survey 30th Sept 1946On the (State if Machinery fitted Aft and if Single, Twin or Triple Screw) Steel Single Screw Tug EMPIRE LEONARD Renamed SUN XVIState Type (Full Scantling/Complete Superstructure with or without Tonnage Openings) ✓ State Type of Erections None

<b>TONNAGE under Tonnage Deck</b> <u>217.93</u> No. of space or spaces between Tonnage Dk. and Upper Dk. <u>✓</u> Total <u>✓</u> Gross Tonnage <u>233.24</u> Register Tonnage <u>5.00</u>	<b>CLASS</b> <u>100A1</u> State if with freeboard as condition of Class <u>No.</u> <b>Length</b> from fore part of stem to after part of stern post on summer L.W.L. See Sec. 3 (1a) <u>105.0</u> <b>Breadth</b> (greatest moulded) <u>B 27.0</u> <b>Depth</b> , at middle of length from top of keel to top of beam at side of uppermost continuous deck. See Sec. 3 (1c) <u>D 12.5</u> <b>1st Longitudinal Number</b> (L x D) <u>1312.5</u> <b>2nd Numeral</b> L x (B + D) <u>4147.5</u> <b>Framing Depth</b> "d," at middle of length. See Sec. 3 (1d) <u>11.42</u> <b>Proportions</b> —Depth to Length—Uppermost continuous deck to top of keel <u>8.4</u> Do. Long Bridge to top of keel <u>✓</u> <b>Draught Moulded</b> <u>11'-0 1/2"</u>	<b>Built at</b> <u>ABERDEEN</u> <b>Launched</b> <u>31-5-46</u> <b>Yard No.</b> <u>712</u> <b>Builders</b> <u>A. HALL &amp; CO LTD ABERDEEN</u> <b>Owners</b> <u>MINISTRY OF TRANSPORT</u> <b>Now sold to</b> <u>Messrs W.H.J. ALEXANDER LTD</u> <b>Managers</b> <u>(Where necessary to be entered in Reg. Book)</u> <b>Residence</b> <u></u> <b>Port of Registry</b> <u>LONDON</u> <b>If surveyed while building, afloat, or in dry dock</b> <u>FIRST ENTRY</u>
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## FRAMES, DOUBLE BOTTOM AND BEAMS.

	INCHES IN SHIP.	Any Departure from Approved Plans to be Noted.		INCHES IN SHIP.	Any Departure from Approved Plans to be Noted.
<b>FRAMES, Spacing</b> <u>amidships...THROUGHOUT</u>	21"	✓	<b>Bracket Floors, Frame</b>	✓	✓
" " <u>from 1/2 length amidships to Collision bulkhead</u>	✓		" " <b>Reversed Frame</b>	✓	✓
" " <u>in peaks</u>	21"	✓	" " <b>Vertical Struts</b>	✓	✓
<b>SIDE FRAMING. REMAINDER</b>	5" 3" .30 BA. ✓		<b>Centre Girder, depth and thickness amidships</b>	✓	✓
Frame Amidships, Angle, E or F	5" 3" .36 BA. ✓		" " <b>top Angles</b>	✓	✓
<u>INWAY OIL BUNKERS - BOILER ROOM.</u>	5" 3" .36 BA. ✓		" " <b>bottom Angles</b>	✓	✓
" " <u>Extends up to</u>	UPPER DECK	✓	<b>Side Girders, No. each side and thickness</b>	✓	✓
<b>Reversed Frame Amidships, Angle</b>	2 1/2" 2 1/2" .34 3 1/2" 3 1/2" .40 BS. ✓		<b>Margin Plate</b> depth (excl. of flange) and thickness	✓	✓
" " <u>Extends up to</u>	4 1/2" 4 1/2" .50 E.S. ✓		" " <b>Vertical Angle to Tank side</b>	✓	✓
" " <u>FITTED ACROSS TOP OF FLOORS</u>			" " <b>Bracket abaft 1/2 len. from stem</b>	✓	✓
<b>Depth of Framing Girder</b>	5"	✓	" " <b>Vertical Angle to Tank side</b>	✓	✓
<b>Frames in Uppermost Continuous 'tween Decks, Angle, E or F</b>	✓	✓	" " <b>Bracket from forward 1/2 len. from stem to Panting Area</b>	✓	✓
" " <b>Second 'tween Decks, Angle, E or F</b>	✓	✓	" " <b>Gussets, spacing and scantling abaft 1/2 len. from stem</b>	✓	✓
" " <b>Third " " CANT. FRAME</b>	4 3 .30 A. ✓		" " <b>Gussets, spacing and scantling from forward 1/2 len. from stem to Panting Area</b>	✓	✓
" " <u>from 1/2 len. for'd. to 15% len. from Stem</u>	✓	✓	<b>Tank Side Brackets, height above base line at toe of Frame and thickness</b>	✓	✓
" " <u>in Peaks, Angle or F</u>	5 3 .30 BA. ✓		<b>INNER BOTTOM PLATING.</b>		
<b>Diameter and Spacing of Rivets through Frame and Shell Plating amidships</b>	3/4" 5 1/4" PITCH. ✓		<b>Breadth and thickness of Middle Line Strake</b>	✓	✓
<b>State if Frame Joggled</b>	Yco. ✓		<b>Thickness of remainder in Holds</b>	✓	✓
<b>Are the scantlings and arrangements in the Panting Area in accordance with the Rules and/or as approved?</b>	AS APPROVED. ✓		<b>Are Rule requirements complied with regarding increases of scantlings in way of double bottom in E. &amp; B. space and framing in Bunkers and Boiler Room?</b>	✓	✓
<b>Are the scantlings and arrangements in way of the Bottom Forward in accordance with the Rules and/or as approved?</b>	" " ✓		<b>BEAMS.</b>		
<b>ANGLE BOTTOM. BOILER STOODS</b>	.50 ✓		<b>Uppermost Continuous Deck, amidships in</b>	6 3 .38 + .32 + .28 BA. ✓	
<b>Floors, Depth and thickness at mid-line in Holds</b>	18" .36 .50 IN BUNKERS ✓		" " <b>Wells, Angle, E or F</b>	✓	✓
<b>Height of Brackets at side above base line at toe of frame</b>	IN E.S. .50 ✓		" " <b>in way of Bridge, Angle, E or F</b>	6 3 .28 BA. ✓	
<b>Middle Line Keelson, on Floors, Angles</b>	TRANSOM FLOOR .38" ✓		<b>Spacing</b>	5 3 .40 A. IN WAY AFT PK. ✓	
" " <b>Through Plate or Intercoastal Plate</b>	7 3 .44 DOUBLE ✓		<b>Second Deck, amidships, Angle, E or F</b>	3 3 .30 A. EVERY FL. ✓	
" " <b>Foundation Plate on Floors</b>	FOR'D OFF FEED TANK ✓		<b>Spacing</b>	4 3 .30 A. E. SPACE. ✓	
" " <b>Flat Plate Keel Angles</b>	✓	✓	" " <b>Third Deck, amidships, Angle, E or F</b>	4 3 .30 A. ELSEWHERE. ✓	
<b>Side Keelsons, No. each side</b>	ONE IN BOILER SPACE. ✓		<b>Spacing</b>		
" " <b>thickness of Intercoastal Plate</b>	✓	✓	<b>Fourth Deck, amidships, Angle, E or F</b>		
" " <b>Angles</b>	DOUBLE. ✓		<b>Spacing</b>		
<b>DOUBLE BOTTOM.</b>	7 3 .48 BA. ✓		<b>ACCOMMODATION SOLES FOR'D + AFT.</b>	4 3 .30 A. ✓	
<b>Solid Floors, thickness and spacing</b>			<b>Reop Deck, Angle, E or F</b>		
" " <b>Are Frame and Reversed Frame joggled?</b>	✓	✓	<b>Spacing</b>	ALT. FRAMES. ✓	
<b>Bracket Floors, breadth and thickness at middle line</b>	✓	✓	<b>Bridge Deck, Angle, E or F</b>	✓	✓
" " <b>breadth and thickness at margin plate</b>	✓	✓	<b>Spacing</b>	✓	✓
			<b>Forecastle Deck, Angle, E or F</b>	✓	✓
			<b>Spacing</b>	✓	✓



## PILLARS AND DECKS.

	INCHES IN SHIP.	Any Departure from Approved Plans to be Noted.	INCHES IN SHIP.	Any Departure from Approved Plans to be Noted.
PILLARS, No. of Rows .....	AS PER PROFILE ✓			
" in <i>Aft<sup>n</sup> Ford.</i> ..... Size and Spacing .....	2' - 2½" DIA. ✓			
" " <i>Crew Space Aft.</i> ..... " " " " " "	2½" " ✓			
" " <i>Engine Room.</i> ..... " " " " " "	3" " ✓ 2 P. 25.			
" in Holds " " " " " "	2½" " ✓ 2 P. 25.			
" " " " " " " " " "				
Centre Line Bulkhead. <del>Stiffeners and Spacing</del> .....	✓ ✓ ✓			
<del>Plating thickness of</del> .....	✓ ✓ ✓			
STRINGERS AND DECKS. Uppermost Continuous Deck. Stringer Plate, breadth and thickness in Wells .....	60" . 36" ✓			
" " " " in way of Bridge .....	✓ ✓			
" Angle in Wells .....	3 3 . 34 ✓			
Thickness of Plating abreast Deck openings in way of Wells .....	6 3 . 34 AT STERN. ✓			
Thickness of Plating abreast Deck openings in way of Bridge .....	30" . 26" INSIDE HOUSES. ✓			
Thickness of Plating within line of openings ...	✓ ✓ ✓			
If Sheathed, material and thickness.....	5x2½" OVER ACCY ONLY ✓			
Second Deck. Stringer Plate, breadth and thickness in Wells .....	✓ ✓ ✓			
Stringer Plate, breadth and thickness in way of Bridge .....				
Thickness of Plating abreast Deck openings in way of Wells .....				
Thickness of Plating abreast Deck openings in way of Bridge .....				
Thickness of Plating within line of openings ...				
If Sheathed, material and thickness.....				
Third Deck. Stringer Plate, breadth and thickness.....				
If Plated, state thickness .....				
Fourth Deck. Stringer Plate, breadth and thickness.....				
If Plated, state thickness.....				
Poop Deck. Stringer Plate, breadth and thickness.....				
Plating, Sheathing, material and thickness ...				
Bridge Deck. Stringer Plate, breadth and thickness.....				
Plating, Sheathing, material and thickness ...				
Forecastle Deck. Stringer Plate, breadth and thickness.....				
Plating, Sheathing, material and thickness...				

## SHELL PLATING.

SCANTLINGS.						RIVETING.							
STRAKES.	AS IN VESSEL.				ANY DEPARTURE FROM APPROVED PLANS TO BE NOTED,	<sup><i>Upper</i></sup> EDGES. State if jogged? No. ✓				BUTTS.			
	AMIDSHIPS.		FORWARD.	AFT.		SINGLE OR DOUBLE.	RIVETS.		NO. OF ROWS OF RIVETS.	RIVETS.		STRAPPED & LAPPED.	
	Breadth.	Thickness.	Thickness.	Thickness.		Diam.	Spacing cr. to cr.	Diam.		Spacing cr. to cr.			
	Inches.	Inches.	Inches.	Inches.		Inches.	Inches.		Inches.	Inches.			
<del>Flat Plate Keel</del> .....	✓	✓	-	✓		<i>Keel, stem - stem frame 2 rows raked 1" rivets 5" pitch</i>							
" Dblg. (if any) .....	✓	✓	✓	✓									
Bottom Plating, No. of Strakes ..... <i>3</i>	<i>A 38"</i>	<i>.36</i>	<i>.30</i>	<i>.31</i>	<i>Base plate .36"</i>	<i>2 1/2" single</i>	<i>3/4</i>	<i>A 2R 9 3/4"</i>	<i>3/4</i>	<i>2 5/8</i>	<i>A straps</i>		
	<i>B 52</i>	<i>.34</i>	<i>.30</i>	<i>.34</i>				<i>B C 2R 5"</i>	<i>"</i>	<i>"</i>	<i>Lapped</i>		
	<i>C 52</i>	<i>.34</i>	<i>.30</i>	<i>.31</i>				<i>D " 5"</i>	<i>3/4</i>	<i>"</i>	<i>Lapped</i>		
	<i>D 52</i>	<i>.34</i>	<i>.30</i>	<i>.30</i>			<i>Seams 4 1/2" double in way of oil bunker. ✓</i>						
Bilge Plating, No. of Strakes ..... <i>1</i>	<i>D 52</i>	<i>.34</i>	<i>.30</i>	<i>.30</i>		<i>2 1/2" single</i>	<i>3/4</i>	<i>2R 9 3/4"</i>	<i>3/4</i>	<i>2 5/8</i>	<i>Straps</i>		
<del>Side Plating, No. of Strakes</del> .....	-	-	-	-									
Upper Deck, Sheer-strake in Wells.....	<i>F 55 1/2</i>	<i>.50</i>	<i>.50</i>	<i>.36</i>		<i>2 1/2" single</i>	<i>3/4</i>	<i>2R 9 3/4"</i>	<i>3/4</i>	<i>2 5/8</i>	<i>Straps</i>		
<del>Upper Deck, Sheer-strake in Bridge</del> ...	-	-	-	-									
Strake below Sheer-strake in Wells.....	<i>E 50 1/2</i>	<i>.36</i>	<i>.36</i>	<i>.30</i>		<i>4 1/2" double</i>	<i>3/4</i>	<i>2R 5"</i>	<i>3/4</i>	<i>2 5/8</i>	<i>Lapped</i>		
<del>Strake below Sheer-strake in Bridge</del> ...	-	-	-	-									
Poop Side-Plating.....	<i>six 3/4" rivets between frames, and one through frames, in each row where frames are spaced not more than 22 1/2" on run of frames ✓</i>												
<del>BULWARK Bridge-Side Plating</del> .....	<i>33</i>	<i>.30</i>	<i>.30</i>	<i>.36</i>		<i>r</i>	<i>r</i>	<i>1R 5 1/4"</i>	<i>3/4</i>	<i>4 1/2</i>	<i>Straps</i>		
<del>Forecastle Side-Plating</del> .....	-	-	-	-		<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>-</i>	<i>-</i>		

## WATERTIGHT BULKHEADS.

Total No. of W.T. BULKHEADS in Vessel—

Extending to Upper Deck (Sec. 3 c)..... 3 *water tight* ✓

„ ~~Deck next below~~

As per Rule & *as approved* 3 W.T. ✓ 2 O.T. ✓ 2 Non W.T. ✓

FORGINGS AND CASTINGS.

	Castings or Forging.	Scantlings.	Maker's Name.	Any Departure from Approved Plans to be noted.
KEEL, Bar .....	B. Plate	7 1/2 x 1 1/8	Small Iron Co.	The
STEM .....	"	"	"	"
STERN FRAME { Propeller Post .....	FORGED	6 x 3"	T. S. Forster & S.	Super
{ Rudder .....	SCRAP STEEL	6 x 3"	Small Iron Co.	
Speed of Vessel .....	Ten	Knots	✓	State
RUDDER—Type .....	Single	Plate	✓	
" A x D .....		105	✓	Certi
" Diam. of head .....		5 3/4"	✓	Cor
" Mainpiece at top pintle .....		6"	✓	Ch
" " heel .....		4 3/4"	✓	
" how constructed .....	Mainpiece	rolled steel angle		
" double or single plate		shrouds on + fitted to mainpiece		
" coupling, vertical or		75"		
" horizontal .....		NONE.	✓	

				Plating Thickness.	STIFFENERS.			
					VERTICAL.		HORIZONTAL.	
					Scantlings.	Spacing.	Scantlings.	Spacing.
MIDSHIP	BULKH'D,	Upper 'tween decks						
"	"	Second	"					
"	"	Third	"					
"	"	Holds .....						
COLLISION	"	(in Hold) .....						
AFTER PEAK	"	" .....						

STEEL. Manufacturer's Name or Trade Mark of the Steel used in the construction of the Vessel (state process of manufacture) *Siemens Martin*  
*Cousitt Iron Co Ltd, Smith & Leam Ltd, Dorman Long & Co Ltd, Bolwilles Ltd*  
*Steel Co of Scotland Ltd.*  
Has the Steel been tested as required by the Rules? *Yes.*







GENERAL REMARKS—(The Surveyor should state the Number of Report and Name of any Sister Vessel. Plans showing Vessel as built should be forwarded and a List of the Plans should be embodied.)

N <sup>o</sup>	PLATING.	VERTICAL STIFFENERS	SPACING.	HORIZONTAL STIFFENERS.	REMARKS
4	30" ✓	3" x 2 1/2" x 30" A. ✓	24" ✓	✓	W.T. ✓
6	25" ✓	2 1/2" x 2 1/2" x 26" A. ✓	36" ✓	3 x 3 x 30" A. ✓	NON W.T. ✓
7	50" ✓	✓	✓	FLOOR ANGE 3 x 3 x 30" ✓	W.T. ✓
13	25" ✓	2 1/2" x 2 1/2" x 25" A. ✓	30" x 36" ✓	✓	NON W.T. ✓
24	30" x 36" ✓	8 x 3 x 32" BA. 7 x 3 x 36" BA. 6 x 3 x 34" BA. ✓	24" ✓	E.R. FLOOR 3 x 3 x 30" ✓	O.T. ✓
30	" ✓	8 x 3 x 32" BA. 6 x 3 x 40" BA. ✓	" ✓	S.H. " " " ✓	O.T. ✓
43	26" x 30" x 32" ✓	3 x 3 x 30" A. 4 x 3 x 30" x 26" A. 5 x 3 x 30" ✓	24", 27", 31" ✓	TANK TOP 3 x 3 x 36" ✓	W.T. ✓
56	30" x 33" ✓	4 x 3 x 30" A. 5 x 3 x 42" BA. 7 x 3 x 46" BA. ✓	24" ✓	FLOOR ANGE 3 x 3 x 30" ✓	W.T. ✓

EMPIRE RAYMOND ABN RPT N<sup>o</sup> 21857 is a sister vessel.

The following documents are forwarded herewith:—

Rudder certificate. Sternframe certificate. Steel Invoices.  
The approved plans are retained for sister vessel.

PARTICULARS OF ELECTRIC WELDING (if employed)

Miscellaneous deck fittings. No main structural work.

SPECIAL NOTATIONS:—Either as part of the vessel's class or for record in the Register Book.

Oil fuel, Lloyd's A.C.P. Direction Finder D.F.

Particulars of Drop Test of Cast Steel Anchors, viz.:—  
Weight, Surveyor's Initials, Number of Certificate, Date of Test.

1st Bower 3 cwt 2 gr 24 lbs AEG 8123 18-1-46.  
2nd " 3 cwt 2 gr 11 lbs AEG 7420 3-5-45.  
3rd " "

PARTICULARS FOR RECORD in the REGISTER BOOK.—Length of Poop ✓ ft., R.Q.D. ✓ ft., Bridge ✓ ft., Forecastle ✓ ft.

(in feet and tenths). When the Poop or Forecastle are joined to the B.D., this should be distinctly stated. ✓

Official No. 180964. Signal Letters. Extreme Breadth over Moulding 27' 5 1/2" ✓ Over-all Length 112' 9 1/2" ✓  
(Circ. 1611) (Circ. 1703)

No. and Material of Decks. ONE DECK STEEL.

Parts of Bottom of Vessel coated with cement or approved composition. Bottom cemented between peaks, bituminous solution and enamel below platform in machinery spaces and in forward store in.

Particulars of composition (if fitted) and of approval. ✓

PARTICULARS OF WATER BALLAST:—(Comprising all tanks which may be used for Water Ballast. (Circ. 1284)  
Wells are not to be included in the lengths of the tanks, but Cofferdams and Dry Tanks (if tested) are to be included.

Where Fitted.	Length.	Water Capacity.	Where Fitted.	Length.	Water Capacity.
	Feet.	Tons.		Feet.	Tons.
Double bottom, aft,	✓	✓	Fore peak tank,	7.82	18
Double bottom, under Engines and Boilers,	✓	✓	After peak tank,	13.03	10.5
Double bottom, if under Engines only,	✓	✓	Deep tank, aft,	✓	✓
Double bottom, if under Boilers only,	✓	✓	Deep tank, forward, FEED WATER TANK	5.25	14.5
Double bottom, forward,	✓	✓	Other tanks, if fitted,	✓	✓
Total length (if continuous) and Capacity	✓	✓	(If necessary furnish further information by sketch.)	✓	✓

Order for Special Survey No. 2001

Date 16-10-45.

Dates of Surveys held while building

1945 Aug 20 31 Sept 27 Oct 10, 23, Nov 1, 7, 16, 22, Dec 28  
1946 Jan 9, 17, 21, 30 Feb 13, 20, 27 Mar. 6, 16, 21, 29 Apr. 4, 11, 15, 24.  
May 3, 10, 16, 21, 23, 27, 29, 30. June 4, 12, 28 July 5, 29 Aug 9.  
Sept 3, 15, 18, 25, 30.

Total No. of Visits 14.