

# REPORT of SURVEY for REPAIRS, &c.

Date of writing report 31-3-1947 When handed in at Local Office 31-3-1947 Port of BOMBAY  
 Survey held at BOMBAY Date, First Survey 8-11-46 Last Survey 10-3-1947  
 No. in Reg. Book 77018 on the Woolly Iron or Steel Screw Steamer "KILWA" (ex. s.s. "KILUNGCHOW") (No. of Visits 39)

TONNAGE:— Built at Greenock By Whom Scotts' S.B. & E. Co. W. W. W. YEAR 1921 MONTH -  
 GROSS 2653 Owners British India S.N. Co. Ltd. Owners' Address -  
 UNDER DK. 2225 Managers - (If not already recorded in Appendix to Register Book).  
 NET 1545 Port belonging to London.

Surveyed Afloat or in Dry Dock? MOGUL DRYDOCK Name of Dock MOGUL DRYDOCK Destined Voyage MOGULSSA  
 WB=Cell D Bor D Ba feet; uE&B feet; f feet }  
 total capacity tons. FPT tons; APT tons; MT feet tons }

N.B.—All alterations in the existing records should be underlined.  
 If the Vessel has Water Ballast Tanks, state whether the manhole covers have been removed, and the insides of the tanks examined. Also state the amount of deterioration (if any) found in the thicknesses of the floors, framing, girders, and of the inner bottom plating especially in the boiler space.

Last Report, No. - Port -

(Periodical Surveys, when held must be reported in detail and serially in the terms of the Rules. State clearly the cause of Repairs, if any, and, in detail the nature and extent of Examinations and subsequent repairs. Repairs on account of Damage (the cause of which must be stated) should be separated from Repairs due to other causes; and besides being detailed in the body of the report, should be summarised in the form shown below. Whenever the replacement of Anchors or Chains is reported the particulars should be clearly stated in the space provided on the back of this form. State also the dates and initials of any letters respecting this case.)

In damage cases where the Surveyor has not made a special damage report he is required to state whether he offered his services for this purpose and to whom and why they were declined NOT REQUIRED AS VESSEL'S FREEBOARD (IF ASSIGNED) AS PAINTED ON SHIP AND NOW VERIFIED

PURCHASED WITH THESE DEFECTS. Was a damage report made by anyone else? If so, by whom? NO.

REPAIRS, OR EXAMINATION AS PER RULE, FOR Classification and Special Survey (DR).  
 Please see Secretary's letters dated 15-11-46, 25-11-46, 6-1-47, 23-1-47 and 26-2-47, also various letters and cables from this office to the Secretary between 21-10-46 and 6-3-47.  
NOW DONE FOR CONDITION AND S.S. (DR.) in conjunction with a Classification survey.

Vessel placed in a dry dock. Bottom and rudder cleaned, scaled, examined found or placed in good condition and recoated.  
 Rudder lifted, bushed and refitted.  
 Holds, peaks, tween decks, coal bunkers and machinery spaces cleared and examined. Ceiling removed completely from tank tops in holds and bunkers. Limber boards removed. Cement chocks at ship's sides in tween decks removed as found necessary. Steel work generally,  
 P. T. O.

SUMMARY OF DAMAGE REPAIRS:—	Shell Plates.	Frames.	R. Frames.	Floors and Bracket Floors	Beams.	Inner Bottom Plates.	Dk. Plates.	Other Items:—
Renewed								
Removed and Faird or Repaired	<u>15</u>	<u>✓</u>	<u>✓</u>	<u>19</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>CENTRE GARDER &amp; SIDE GARDERS.</u>
Faird or Repaired in place								

PRESENT CONDITION OF THE	
Decks <u>good</u>	State if Tanks have been examined inside <u>YES</u>
Caulking of Decks <u>good</u>	State if Tanks now tested <u>YES</u>
Coamings <u>good</u>	Bulkheads <u>good</u>
Beams & Fastenings <u>good</u>	Ceiling <u>YES</u>
Outside Plating <u>good</u>	Cement or Asphalt <u>CEMENT EXCEPT IN OIL FUEL TANKS</u>
Outside Plating in way of sidelights <u>good</u>	Rudder <u>good</u>
Breasthooks <u>good</u>	Steering gear and its connections <u>good</u>
Transoms <u>good</u>	Windlass <u>good</u>
Frames <u>good</u>	Have pumps now been examined and found efficient? <u>GOOD</u>
Reverse Frames <u>✓</u>	Have Sluice Valves now been examined and found efficient? <u>✓</u>
Longitudinals <u>✓</u>	Have Watertight Doors now been examined and found efficient? <u>YES</u>
Transverses <u>✓</u>	Have Ventilators and their Coamings been examined and found efficient? <u>YES</u>
Floors <u>good</u>	Air and Sounding Pipes <u>good</u>
Keelsons <u>good</u>	Dblg. Plates under Sounding Pipes <u>YES</u>
Stringers <u>good</u>	Engine Room Skylights <u>good</u>
Inner Bottom Plating <u>good</u>	Coal Bunkers, Open'gs, Lids, &c. <u>good</u>
	Oil Bunkers <u>good</u>
	Scuppers <u>good</u>
	Cargo Hatchways <u>good</u>
	Hatches <u>good</u>
	Planking of Wood Vessels
	Caulking ditto
	Treenails ditto
	Breasthooks & Stemson ditto
	Transoms Pointers & Crutches ditto
	Timbers of Frame at openings ditto
	Ditto Ditto at other places ditto
	Stringers, Clamps & Shelves ditto
	Galting ditto
	(State if examined).
	Copper, or Y.M. of Wood Vessels <u>✓</u>
	(State if on Felt.)
	When put on, Month <u>✓</u> Year <u>✓</u>
	Boats <u>good</u>
	Masts, Yards, &c. <u>good</u>
	Condition, how ascertained <u>DRILLING</u>
	(State if wedges removed) <u>NONE</u>
	Sails <u>✓</u>
	Equipment letter <u>✓</u>
	Anchors, No. of <u>3 B. 1 S. 1 K.</u>
	Chain Locker <u>good</u>
	Cables (State if now ranged) <u>YES</u>
	Cables length <u>270</u> mean diam. <u>1 3/4</u> ; <u>1 1/2</u>
	(on board)
	Cables Rule length <u>✓</u> size <u>✓</u>
	Hawser & Warps <u>good</u>
	Standing and Running Rigging <u>good</u>

### General Observations, Opinion as to Class, Recommendation, &c.:

State clearly whether any and, if so, what alteration is suggested to be made in the existing classification and notification of the vessel in the Register Book consequent upon this survey, thus, for example— "to remain as now classed in the Register Book without fresh record of Survey," "to remain as classed and to have record of survey, 1,24," or "to remain as classed and to have record of survey, 1,24, and the notations of ss. No. 1-24 and pnd 24, &c."

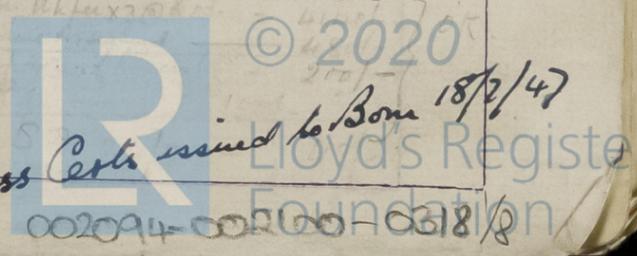
This vessel is eligible, in my opinion, to be recommended to be classed I00 A- with record of Survey 3.47 and notation of S.S. Bom. 3.47(Dr.)

Survey Fee (Per Section 25)	Classification	Rs 4140/-	Fees applied for, 31-3-1947
Loadline Assignment	Rs 480/-		
Special Repair Fee (if any)	Rs 200/-		
Per Sec. 29 Sunday fee 24/11/46	Rs 48/-		
Travelling Expenses (if chargeable)	Rs 150/-		
Condition Surveyor's Fee, if any	Cable charges	Rs 42/14/-	Received by me, T.H. Noel

Committee's Minute 100A - with freeboard Subject  
 Character Assigned 3.47 Bom  
S.S. Bom. - 3.47 (Dr)  
White Bom  
 LMC 3.47 Subject  
 Seen 3.47  
 Fitted for oil fuel  
 1 SB 200lb. (Sph) 2 B. 100lb  
 FLASH POINT ABOVE 150°F.  
 Class Certs issued to Bom 18/2/47  
 Lloyd's Register Foundation

*M.S.*  
36742

Is Certificate required? If so, to be sent to I.M.S. OFFICE





(b) Aft the Collision Bulkhead.

There are two ship's side stringers(P. & S.) spaced eight feet apart, ~~aft~~  
The upper stringer extends aft from collision bulkhead for 10 frame spaces  
and the lower stringer for 5 frame spaces.

The scantlings are -

Stringer plate 12" x .38", shell lugs 3" x 3" x .38" single riveted.

Face angle 5" x 3" x .38"

In addition to these stringers there is one tier of 3 panting beams  
10" x 3 1/2" x .5" bulb angle, suitably bracketed to alternate frames and fitted  
with a longitudinal tie at the centre line.

(c) After Peak. Within the Peak suitable panting beams and stringers are  
provided of scantlings and numbers equivalent to those of the Fore Peak Tank.

(4) Strengthening under bottom forward.

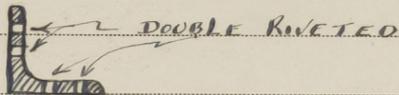
Strengthening verified and is noted hereunder -

(a) The rivets in plating and frames, in bottom forward of the threefifths length  
are spaced not more than 5 1/2 diameters apart from centre to centre.

(b) Within No. 2 D.B. tank that is from floor No. 81 to floor No. 95 two side  
girders of full depth and 4'-0" spacing are fitted each Port and Starboard  
sides.

Within No. 1 D.B. tank owing to finess of Form there is only one side girder  
Port & Starboard sides, of full depth and extending as far forward as practi-  
cable.

(c) All floors forward of floor No. 86 are solid floors and are connected to the  
shell by double riveted angles.



(d) The three strakes of outside plating next to the keel have the midship  
thickness maintained forward to the Rule position of the collision bulkhead. ✓

(5) Equipment. The Owners representative stated that the Owners are  
desirous of having the Classification figure - I for equipment if this is  
practicable. No certificates for anchors and cables available on board.  
The Owners have applied to the previous Owners for them.

The following details are submitted for the consideration of the Committee.

ANCHORS. The Bower anchors are of the stockless type and of approved  
design. No markings were decipherable. Estimated: 22182, letter "t"

1st Bower	43 Cwt.	Stockless	
2nd "	42 1/2 Cwt.	" "	
3rd "	42 Cwt.	" "	
		Collective weight	127 1/2 Cwt. ✓
Kedge anchor	6 Cwt 2 Qtrs 0 lb.		Rule 119 1/2
Stream anchor	14 Cwt 2 Qtrs. 0 lb.	ex stock	Rule 111 cwt's ex stock

ANCHOR CABLES. Markings on these cable not decipherable. Rule 240 fth's 1 1/16"

270 fathoms of stud link cable of approved design made up of the following -

135 fathoms	having mean diameter of	1.23/32"	1 1/16 + 1/32 ✓	
45 "	" " " "	1.14/16"	1 1/16 ✓	limit for wear
75 "	" " " "	1.25/32"	1 1/16 + 1/32 ✓	1 1/16"
15 "	" " " "	1.9/16"	1 9/16	below limit for wear



Stream wire - 75 fathoms of 4½" Flexible steel wire Rope. ✓  
 Towline - 100 fathoms of 4" flexible steel wire rope. ✓  
 Hawsers - 2 lengths each. 90 fathoms of 2½" steel wire rope. ✓  
 Warps - 2 lengths each 90 fathoms of 2½" steel wire rope. ✓  
 Masts - These are working masts and scantlings are given hereunder -

	Foremast.	Main mast.
Length from upper deck to Hounds	46'-0"	46'-0"
Diameter at upper deck (No Partners)	22"	22"
Diameter at Hounds	18"	18"
Thickness at upper deck	.46"	.46"
Thickness at Hounds	.32"	.32"
Number of shrouds to each side & size	3-1½" dia.	3-1½" dia.
Number of topmast back stays & size	1- 1" dia.	1- 1" dia.
Number of Fore mast stays and size	1- 1" dia.	1- 1" dia.
Size of Fore stay	1½" dia.	1½" dia.
Wedging	Nil	Nil
Material	Steel	Steel

(6) The upper deck scantlings verified and found to be maintained throughout the Bridge (see Secretary's letter dated 23rd January 1947).

Load Line markings as per the Secretary's letter of 26th February 1947, have now been marked on ship's sides and efficiently cut in. Verification froms attached.

MISCELLANEOUS. Scantlings of structure under boilers and machinery, also of propeller shaft tunnel plating and stiffeners, bulwark plating and stanchions, superstructures, casings, deck sheathing, rudder ~~collar~~ and quadrant etc., verified and found to conform with the Rule requirements. The arrangements for operating the watertight door to the shaft tunnel and from stokehold to No.3 hold checked and found to be in accordance with the Rule requirements.

Cargo battens of suitable size and thickness are fitted in all cargo holds and tween decks.

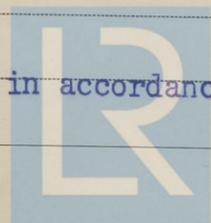
In lower holds ceiling is fitted in square of the hatches only except over .B. tanks carrying oil fuel where the ceiling is laid throughout on thwartship battens.

All oil fuel arrangements of air pipes, sounding pipes, oil pressure pipes, clearance between Boilers and tank top, settling tanks, gutterways, etc., checked and found to be in accordance with the Rules.

There are no bilges in the lower holds, boiler room and machinery space. Gutter ways are provided which gives effective drainage to suitable wells

STEERING GEAR. This vessel has a steam steering engine driving the rudder quadrant through the usual worm and gear wheel and is operated by telemotor from the Bridge from the Poop.

The arrangement of brake, buffer springs and quadrant stoppers are in accordance



with the Rules.

A secondary means of steering is provided by means of wires, pennants and tackles to the two after winches.

This gear was rigged and tried under working conditions and found efficient.

The spare gear is in accordance with the Rules.

REPAIRS DUE TO WEAR AND TEAR.

(1) Shell plating.

Port side "D" strake No.2	Shell plate renewed.
" " "E" " Nos.1 & 2	" " "
" " "E" " No.7	" " doubled.
" " "F" " No.2 & 3	" " renewed.
" " "F" " No.4	" " cropped and for'd end renewed.
" " "G" " No.2	" " " " " " "
" " "G" " No.9 & 10	" " " " " " "
" " "H" " No.9 & 10	" " " " part renewed.
" " "J" " No.13	" " " " " " "
" " Poop side plating doubled as necessary in way of side lights,	plate renewed.
" " Forecastle side 1 plate renewed and 2 doubled in way of side lights.	

Starbd. Side "D" strake No.1	Shell plate renewed.
" " "E" " No.1 & 2	" " "
" " "E" " No.8	" " doubled in way of scupper.
" " "F" " No.1 & 3	" " renewed.
" " "F" " No.2 & 4	" " cropped and part renewed.
" " "G" " No.1	" " renewed.
" " "G" "v No.2	" " cropped and part renewed.
" " "J" " No.7 & 13	" " renewed.
" " Forecastle side plates - 1 renewed, 1 cropped and part renewed.	
" " Poop side plates - 1 renewed, 1 cropped and part renewed.	

2) BULWARKS.

Port side - 2 bulwark plates renewed.

Starbd. side - 4 " " "

Gangway doors renewed or repaired as necessary.

3) MAIN DECK.

(a) Port & Starbd. side houses on Foredeck renewed. Steel deck plating in way renewed.

(b) Deck composition in lavatories and wash places within Forecastle and Poop lifted and deck plating in way Port and Starbd. sides renewed.

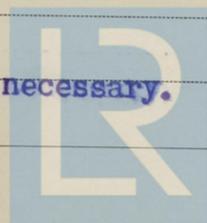
(c) Deck composition on Port side within Bridge space lifted and all deck plating in way of cabins, alleyway and over settling tanks renewed.

4) TWEEN DECK BUNKERS.

Port and Starbd. sides all deck plating renewed and 15 frames each Port and Starbd. sides cropped and part renewed and beam knees renewed.

5) LOWER BUNKERS.

Stokehold and Engine Room casing renewed as necessary.



S.S. "KILWA".(6) Casings, Bulkheads etc.

- (a) Forecastle Bulkhead cropped and part renewed.
- (b) Engine Room and Fiddley casings within Bridge space cropped and part renewed.
- (c) Collision bulkhead in chain locker and in Peak space partly renewed.
- (d) No.3 Tween deck bulkhead partly renewed.
- (e) Saloon house, on Bridge Deck, side plating doubled for full length, P. & S. just above deck angle.
- (f) Fiddley top plating renewed.
- (g) Lower strake of funnel plating renewed.

(7) GENERAL EQUIPMENT ETC.,

All ventilator coamings & cowls, all air pipes and their goose necks, all fitting pipes, sounding pipes, sanitary pipes, bilge and ballast pipes renewed as necessary.

All hatch covers, battens and cleats, tarpaulins etc. renewed as necessary. All rigging renewed. All side lights re-rubered and dead-lights overhauled.

Repairs due to Grounding after Bombing attack.

(Please note dates and place of occurrence not available - No damage report required as the present Owners purchased vessel on understanding damage made good at their expense).

BOTTOM PLATING.

Keel plates No.5 and 6 removed, faired and refitted. Centre girder in way cropped faired and refitted.

Port side "A" strake No.6 & 7 plates removed, faired and replaced.

" " "A" " No.11 " cropped, faired and replaced.

" " "B" " No.5 & 6 " removed, faired and replaced.

" " "B" " No.4 " cropped, faired and replaced.

" " "B" " No.7 " cropped and part renewed.

" " "C" " No.6 & 7 " removed, faired and replaced.

" " "D" " No.6 " cropped, faired and replaced.

" " "D" " No.7 " removed, faired and replaced.

" " Floors No.51 to 71 removed, faired and refitted.

" " Floors No.27 to 30 cropped, faired and refitted.

" " side girder intercostals between floors 51 -71 removed, faired and refitted as necessary.

Starboard side "A" Strake No.5 & 6 plates removed, faired and replaced.

" " "A" " No.7 " cropped and part renewed.

" " "A" " No.9 " cropped, faired and replaced.

" " Floors No.55 to 70 cropped, faired and replaced.

" " Floors No.35, 36 & 37 faired in place.

There are a number of local indents throughout the hull which are the result of Bombing attacks. On the freeboard deck the after deck plating which has been renewed at some fairly recent date, is slightly buckled in places. The after bulkhead of the Bridge and the cabin casing at the after end of Bridge space are also slightly buckled as a result of a fire which broke out on board after the above

mentioned bombing.

The making good of these defects were discussed with the Owners and they stated that if it was considered that these buckled plates etc. did not in any way affect the efficiency or seaworthiness of the vessel they were not desirous of fairing these plates. These buckled shell, deck and casing plates were therefore carefully scaled, and examined and found in good condition and in my opinion these do not in any way detract from the efficiency or seaworthiness of the vessel.

For the purpose of recording the local indents on the shell plating they are noted hereunder.

PORT SIDE.

"A" Strake No.2 shell plate 2 indents, each 2 square feet in area, maximum deflection one inch.

"G" Strake No.11 shell plate - 2 indents, each 1.5 square feet in area, maximum deflection  $\frac{3}{4}$  inch.

"J" Strake No.3 shell plate - one indent 1 square foot in area, maximum deflection 1 inch.

"H" Strake No.13 shell plate - one indent 9 square inches in area, maximum indent 3 inches.

STARBOARD SIDE.

"A" Strake No.3 shell plate 2 indents each, 2 square feet in area, maximum deflection one inch.

"B" Strake No.6 shell plate one indent, 2 square feet in area, maximum deflection 2 inches.

"B" Strake No.7 shell plate one indent, 10 square feet in area, maximum deflection one inch.

"B" Strake No.9 shell plate three indents, one 3 square feet and 2 each 1 square foot in area, maximum deflection 1 inch.

"F" Strake No.11 shell plate 2 indents, one 1 square foot and one 6 square feet in area, maximum deflection one inch.

"I" Strake No.12 shell plate 3 indents, each 2 square feet in area maximum deflection 3 inches.

"I" Strake No.13 shell plate 2 indents, one at upper lap and one at lower lap, each  $2\frac{1}{2}$  square feet in area, maximum deflection  $\frac{3}{4}$ "

"I" strake No.14 shell plate one indent, 3 square feet in area, maximum deflection  $\frac{3}{4}$  inch.

"I" Strake No.12 shell plate two indents, one 6 square feet in area with a maximum deflection of 3 inches and the other 1.5 square feet in area with a maximum deflection of 4"

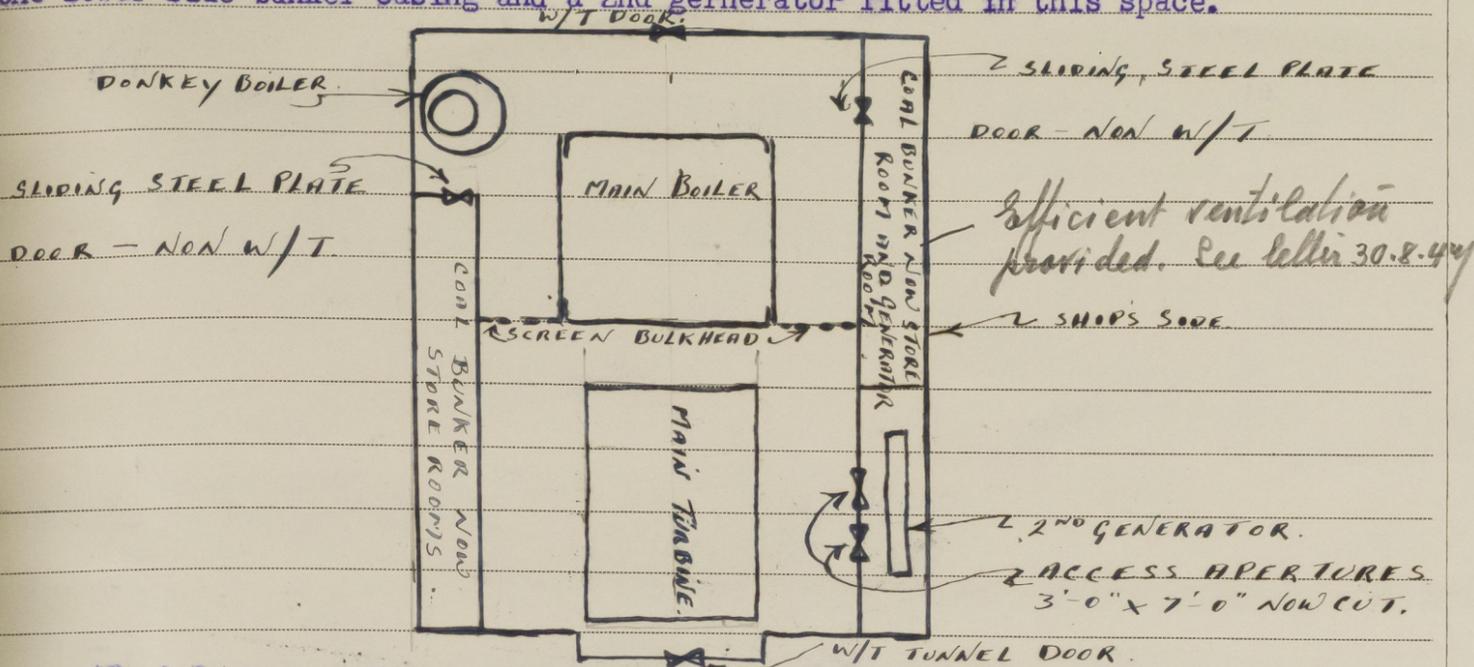
lwards No.10 plate one indent 3 square in area, maximum deflection one inch.

lwards No.11 shell plate 3 indents one 3 square feet in area maximum deflection 2 inches, 2 indents 1 square foot in area, maximum deflection  $\frac{1}{2}$  inch.

OPERATIONS CARRIED OUT AT THIS TIME.

Donkey boiler which was coal burning converted to Oil Burning. The lower and tween deck coal bunkers therefore are required no longer as bunkers and have been converted to store rooms etc.

On the Starboard side of the engine room two access apertures have been cut in the lower side bunker casing and a 2nd generator fitted in this space.



Flush bunker scuttles on Freeboard deck within Bridge space removed and apertures so left permanently sealed by means of riveted plates.

On Freeboard deck with Bridge space 2 extra hatch ways fitted.

2'-7" x 2'-6" x .38 plate x 24" high. These are efficiently constructed and connected to the deck. They are fitted with wood hatch covers, tarpaulins battens and cleats.

An extra house for accommodating 2 officers built at the after end of the boat deck. This is efficiently constructed of steel.

An extra house for accommodating 2 tally clerks erected on Freeboard deck, against Poop Bulkhead. This has been efficiently constructed in teak wood and is efficiently bolted to the steel deck. A spar deck erected on after deck to accommodate extra life boats on account of deck passengers which it is proposed to carry. (see attached drawing).

All the above repairs and alterations have been efficiently carried out.

T. H. Noël

Length of 7' side: 43'