

COPY.

W186-0211 (1/14)

MOBILE, ALABAMA

23rd March 1939.

THIS IS TO CERTIFY that T.G.DODD, the undersigned Surveyor, did at the request of the TRINIDAD LEASEHOLDS LIMITED survey the Steel Screw Steamer "LA CARRIERE", 5685 tons gross register of London, for the purpose of making an examination of the hull and machinery at the termination of the Builders Guarantee Period and reporting on such matters as may be considered to come within the Owners' Requirements at the end of same.

The Guarantee by the Builders of the Vessel's hull, propelling machinery and boilers carries for a period of six months after her trial trip and was extended in agreement with the Builders for one month beyond the specified period until the 13th March 1939.

On 13th March 1939 and subsequently, while this vessel was laying on dry dock and afloat at the Works of the Todd-Johnson Dry Docks Inc., New Orleans, La., the following examination was made and conditions noted as below:

Vessel placed on dry dock at 11:40 a.m., 13th March 1939 and was refloated at 12:30 p.m., 15th March 1939.

1. UNDERWATER BODY:

The underwater body was found to be heavily coated with barnacles and was thoroughly washed down, scraped and wire brushed.

Upon examination of the vessel on dry dock after cleaning it was found that the paint on the flat of bottom to just above the turn of bilge was more or less intact and adhering well to the surfaces, above on the sides the plating was found to be bare in large patches for about three quarters length from aft and altogether

bare forward, no excessive corrosion or pitting was noted but a few shell rivets forward were found slightly honey-combed.

The shell of the vessel was coated with two coats of anti-corrosive to the deep load line, one coat of anti-fouling to the light load line and one coat of boot-topping between the deep and light load lines.

The draft marks forward, amidships and aft were cut in with white paint.

The section of the hull in way of the stern and the rudders were scaled to bare metal and coated with two coats of Galvex.

The rudder was carefully examined, sections being cut out of the fairing in pieces on the forward side of the rudder post between gudgeons for proper examination of the pintles and bushings, the pintles, nuts were tested and all found tight, all the gudgeon bushes being found a good fit. Upon completion of this examination the removed portions of the fairing in pieces were welded to place.

## 2. CHAIN CABLES:

The Chain Cables were ranged on dock and examined, 270 fathoms of 1-15/16" stud link cable, the hardwood forelock pins in the connecting shackles were found to be soft and spongy and they were all removed and replaced with brass tapered pins driven and clinched in place. The cables were coated with bitumastic solution and restowed in the lockers.

The chain lockers were cleaned, all dirt removed and their interiors coated with bitumastic solution.

## 3. ZINC PLATES:

The zinc plates on the rudder post were found to be almost completely wasted away and part missing and a number of their fastenings missing, all these zinc plates

have been renewed and refastened to place with new fastenings as required.

4. ANCHOR WINDLASS:

The anchor windlass was opened out for examination of pistons, rings and valves and was found to be in good order, foundation, wildcats, gears, etc., being found sound.

5. The after deck capstans were opened up for examination of pistons and rings and were found to be in good order.

6. STEERING GEAR:

The steam steering engine was opened up for examination of pistons, rings, valves and bearings and was found or placed in good order. The piston rings in both pistons were found to be badly worn and shoulders were found at the top of both cylinders. These shoulders were ground off so that rings would over ride same, the pistons were removed to the shop, ring grooves were cleaned up/<sup>new rings fitted</sup> and new rings were furnished vessel for spare.

The pump hydraulic rams and telemotor gear, also rudder carrier were generally examined and the gear tried out under working conditions and all found satisfactory.

The hand gear was engaged, operated and found satisfactory.

7. GENERAL EXAMINATION:

The hull structure was generally examined throughout with particular attention to the cargo tanks and all found in good order with no signs of working, the end bulkheads in way of the cofferdams, pump rooms, and boiler rooms were also carefully examined and no leakage noted. The inside surfaces of the bottom plating were examined and were found to be smooth and free from all signs of pitting and the heads of rivets in shell laps, butts, longitudinals, brackets, etc., showed no signs of any deterioration.

The decks, casings, masts, rigging, cargo hold, 'tween decks, crew and machinery spaces under engines and boilers, openings with their closing appliances, fidley, skylights, hatch coamings, covers, and general equipment were examined and found in good condition.

The Master of the vessel states that no leakages through the bulkheads or shell have been noted.

8. AFTER PIPE LINE DAVIT:

It is stated by the Master that this davit was recently used to lift a coil of rope weighing approximately 10 cwt.

The deck plating in way of this davit was found to be buckled, a 5/16" filler plate has been fitted from plate lap to deck beam on the starboard side and a 1/2" doubler fitted in way of the base of the davit, over filler plate and extending to deck beam on the port side to form a flush doubler all welded to place in good order, the wood pad after being dressed as required, with the davit, were all rebolted to place and the necessary removals, such as flag staff with deck clips, electric light conduit, etc., replaced in good order. Upon completion hose test applied and all found tight.

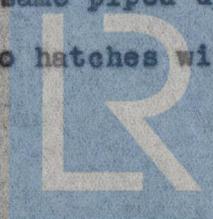
9. NO. 2 COFFERDAM:

BETWEEN NOS. 3 and 4 CARGO TANKS:

This cofferdam is fitted to be used as a cargo space and no means of venting of any kind has been provided. This is clearly an oversight.

Ullage plugs fitted in lids of port and starboard wing lids.

One gate valve each fitted to coamings of port and starboard wing hatches and same piped up to gas vent lines of adjacent main cargo hatches with 3" galvanized iron pipe.



10. EJECTOR AFTER COFFERDAM:

It was reported that this ejector would not work. The ejector with the adjacent steam pipe was removed to the shop and upon examination it was found that the strainer and valve box had been fitted to the wrong end of the ejector, the steam pipe was broken above the welding holding the flange to the ejector and the flange was badly distorted. This condition has been corrected by transferring the strainer and valve box to the correct end of the ejector, renewing the leather disc, taking the valve which was found damaged, installing a distance piece on the lower side of the strainer in lieu of the four long bolts formerly fitted which were found badly bent and fitting four new brass bolts and nuts. The steam pipe has been cut and a new flange fitted and additional piping installed as required to suit altered position of ejector.

11. LAVATORY PIPES:

Lead pipe bends connecting the main supply pipes to the lavatory flushing cocks were reported to have given considerable trouble, three of these pipes have been replaced by temporary copper pipes.

Upon examination found that fourteen (14) of these pipes were defective; the original thickness of these pipes were about 1/8" in the walls but they had evidently been bent cold round a mandril and this had thinned the metal locally at the outside of the bend to paper thickness. Fourteen (14) pipes renewed using old connections.

This condition was caused in my opinion by bad workmanship.

12. MACANKING HATCH:

The bracket on the port side aft carrying the roller was bent and has been straightened. The four stopper lugs were found badly bent and partly torn adrift and

have been removed and four heavier stoppers with proper attachments welded to place.

13. AIR EJECTOR PIPING IN PUMP ROOMS:

This piping has been altered to conform with blueprint supplied and as per recommendations of the B. O. T.

The lengths of piping connecting to the cargo pipe line have been removed and blanks fitted, valves removed and pipes extended so that the bottom of the vertical pipes are below the level of the pump room floor.

14. FALLS FOR DERRICKS:

The Master states that the number of falls on hand is deficient, these have been checked over and it is found there is a deficiency of one wire fall for the 15 ton derrick and two wire falls for the 3 ton derricks.

15. TILING IN MIDSHIP PANTRY:

All the tiling was found loose and upon examination it was found to be laid on cement which had evidently hardened before tiles were laid instead of into soft material and set.

16. GUARD RAILS:

Eight sections of guard rail in way of cargo connections cut out and replaced by chain and hooks. This is a betterment.

17. AFTERPEAK FILLING PIPE:

2" filling pipe extended to poop deck with suitable deck fitting. This is a betterment.

18. FLOOD LIGHTS:

Two flood lights supplied and installed on after boat deck. This is a betterment.

19. WIRELESS OPERATORS ROOM:

Vent from Thermo tank duct changed from side to bottom of duct to prevent air from blowing on instruments.

This is a betterment.

**20. GALLEY STOVE:**

The oil burning equipment to this stove has been examined by a competent combustion engineer on account of frequent fires stated to have occurred, the engineer reports that nothing defective could be found with the installation but the installation should be watched and adjusted as required during operation.

**21. EXHAUST DECK LINE:**

One length of 3" copper pipe just abaft forward pump room found cracked in bend, this was caused by bad workmanship. The pipe evidently not being filled when bent as the inside walls of the pipe in the bend were badly wrinkled.

The wrinkles in pipe have been filled with brazing metal to give a smooth surface and a copper patch fitted over, pipe annealed, tested and refitted to place.

**22. GAS VENT LINE:**

One section of 5" galvanized riser pipe just abaft the forward pump room cracked transversely on inside of bend. This pipe has been cut and the lower section renewed with an easy bend.

The fracture was probably caused by the pipe not being a proper fit, and being pulled to place with a strain.

**23. SEA CONNECTIONS:**

All sea connections including the bilge injection valve opened up, examined and all found in good order. The strainer plates all removed and chests cleaned, coated and plates replaced.

**24. PROPELLER SHAFT:**

Wear down in bush 1/16". Propeller shaft drawn, key removed, thoroughly examined and all found to be in good condition, shaft replaced, gland repacked and propeller hardened up in the presence of the Chief Engineer. The rubber ring was found satisfactory and was replaced.

The grease connection to the stern gland was examined, this was found to enter through a nipple screwed in the edge of the gland and discharges through a 3/8" hole at the back of the gland against the packing; it was found plugged with packing.

25. MAIN BOILERS:

All boiler mountings were opened up, examined, found in good order, repacked and rejointed to place.

The boilers were opened up and thoroughly cleaned on both the water and fire sides and were closely examined over all parts.

The zinc plates were found to be completely gone and all have been renewed, 36 in all, 1" x 6" x 12".

The horizontal and vertical axis of each corrugation of each furnace of all three boilers were calibrated and the results were found satisfactory, blue prints showing the results properly tabulated have been handed to the Chief Engineer.

The interior of all three boilers were found good, no bleeding or corrosion was found, all the heating surfaces were found covered with a fine powdery scale and the furnaces had an eggshell scale.

The steam spaces were showing slight signs of bleeding and have been coated with white zinc and kerosene in all three boilers.

Forward boiler centre furnace mouth; the riveting as noted by the Chief Engineer as having developed a leak was carefully examined, this leakage appears to have taken up and it was not considered necessary to remove the furnace front, approximately thirty (30) rivets have been lightly caulked and no further trouble is anticipated from this source.

A few very minor leaks were noted at shell seams, some tubes both front and back tube plates and one or two combustion chamber stays showed slight evidence of leakage

but all these have apparently taken up.

The boilers are considered to be in excellent condition and the above noted leakages are not abnormal in a new vessel.

26. CARGO PUMPS:

The steam and liquid ends of all cargo pumps, also valve chambers have been opened up and examined and found in good order. The piston rings on all steam and pistons have been freed up.

Exhaust trunks on two cargo pumps were leaky and have been rejointed. This of course would be considered wear and tear.

27. BILGE PUMP FORWARD PUMP ROOM:

This pump had been reported by the Chief Engineer as being unworkable, but is now stated to be in good serviceable condition. The suction valve appears to have been tight in seat. The wings of this valve have been eased.

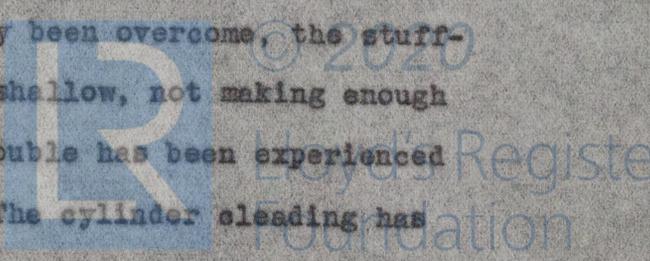
28. 12" KEROSENE CARGO PUMP (FORWARD PUMP ROOM):

The Chief Engineer states that the rocking shaft upon examination was found to be broken inside the six inch bushing and that the breakage was scarped and showed a crystalline fracture.

There is no doubt that this damage was not caused by any working of the pump and on account of the nature of the fracture described by the Chief Engineer it would be my opinion that the cause of damage was from some outside source, either after the test at the Makers' Works and in transit to the Shipyard or while handling and installing on board ship.

29. H.P. LUBRICATOR FITTINGS:

This trouble has apparently been overcome, the stuffing boxes were evidently too shallow, not making enough allowance for packing. No trouble has been experienced lately with this equipment. The cylinder oleading has



been somewhat damaged, necessitated by gaining access to the fittings for overhaul.

30. STRAINER BOX

The strainer box on the suction side of the forward port cargo pump was removed on account of defects. This cast iron box was examined and one of the branches found fractured around the body, the metal in the bottom appeared spongy and had been filled with cement.

A new cast iron strainer box has been made using the old cover and strainer.

This would be in my opinion considered as defective material.

31. MAIN ENGINE CIRCULATING PUMP:

Upper half of casing removed for the examination of the impeller, the impeller shaft was found to be out in way of the packing at both ends and bearings worn and slack. The impeller was removed to the shop and the impeller shaft skimmed in way of packing and bearings, the glands were rebushed and the shell bearings reinstalled, upon completion all closed up in good order.

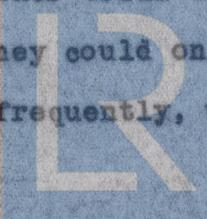
This would be considered ordinary wear and tear.

32. MAIN BOILER FEED PUMPS:

Steam and water ends opened up for examination and all found in good order.

33. FEED FILTER

The Chief Engineer reports that trouble has been continually experienced with these filters overflowing, the porosity of the filter cloths on the cartridges appeared to him doubtful and they were renewed with filter cloths from the ship's stores, when better performance resulted for a time; however, on further trial the filter again proved unsatisfactory and they could only be run by wire-brushing the filter cloths frequently, which has gone on to date.



No drawings of this filter were available.

The proposal of the designer to cut a hole 3" diameter 3" to the centre below the top of the final weir to the flow control compartment attached to the feed water filter was considered and arranged, but on further consideration was cancelled as it was thought that this was a most important matter which should be brought to the notice of both the Builders and the Owners themselves because the amount of oil used in this engine on account of superheat and that the internal condition of the boilers at this time being found so good.

The matter will again be brought up at Trinidad where plans are believed to be available, time did not allow of them being sent on here.

34. MAIN CONDENSER:

Inspection doors removed and tube plates examined and found in good order.

35. FAN CASING & TRUNKS:

Fan casings and trunks cleaned of all dirt and oily deposits.

36. THRUST BLOCK:

Michell type thrust opened out for examination and all found in good order, no appreciable wear found.

37. ECCENTRIC STRAPS:

Three go-ahead eccentric straps opened out for examination and metal found in good order.

38. MAIN ENGINE CYLINDERS:

H.P.Cylinder examined and found in good condition.

M.P.Cylinder examined and found in good condition.

L.P.Cylinder examined, found small sand hole about 1/4" diameter and 3/4" deep in after side about 8" from top of cylinder, this has been drilled out and a 1/2" cast iron pipe plug fitted to place and anchored by small brass dowel.

All cylinder walls found in good order, no excessive wear or scoring being noted.

39. MAIN ENGINE PISTONS:

All pistons examined with rings removed, all pistons, rings, springs found in good order.

40. MAIN ENGINE VALVES:

All valves drawn and examined, H.P. valve opened up and rings freed, springs and rings found in good order and walls of chamber found smooth and clear of scores. M.P. box valve; face slightly scored, this has evidently been caused by the casting warping slightly, the skin of the valve in way of scoring lightly filed to bring valve to good face, faces in chamber found good. L.P. valve and face in chamber found in good order.

41. MAIN ENGINE CRANK SHAFT:

Top halves of main bearings lifted and shaft examined and all found in good order.

Crank shaft gauged with the following results:

Journals counting from forward, No.1 - 21.1000, No.2 - 12.000, No.3 - 14.1000, No.4 - 14.1000, No.5 - 10.1000, No.6 - 2.1000. Coupling bolts tested and found tight.

42. MAIN ENGINE BED PLATE:

Thoroughly examined and found sound, holding down bolts tested and found tight.

43. MAIN ENGINE CRANK PINS:

Metal in bearings sound and good, showing no excessive wear and pins in order.

44. MAIN ENGINE AIR PUMP:

Opened up and examined and found in order.

45. MAIN ENGINE GUIDE SLIPPERS:

All three slippers removed when it was found that the metal was completely worn down to the cast iron strips on the ahead side, the metal on the astern side was in good order; no signs of overheating were noted. The slippers

were removed to the shop, metal on ahead sides removed 1/8" planed off where fitting crosshead to allow more metal for wear and all slippers remetalled on ahead sides with Parsons S.A. white brass.

All rods checked for alignment and all guide slippers refitted to place in good order, fitting liners to astern guide plates as required.

It is considered that the metal used was unsuitable for the purpose as the wear was abnormal for the short period of service.

46. REFRIGERATOR MOTOR STARTER:

This has continually given trouble and is evidently not fitted for its duty and should be replaced as soon as possible by a starter more suitable for the work.

47. It is noted that no gauge glass has been fitted on the observation tank situated under the condenser.

48. The superheater installation was examined and found in order.

49. The hot salt water connection to the ballast pump is evidently in error as this pump is used to circulate the auxiliary condenser when the cargo pumps are running.

The following is a list of items which, in my opinion, are considered to come within the Owners' requirements at the termination of the Builders Guarantee Period, with the cost of repairs and renewals attached:-

<u>After pipe line davit</u>	\$480.00
Deck in way reinforced as evidently not equal to work.	
<u>No.2 cofferdam - Deficiency.</u>	320.00
<u>Ejector after cofferdam - Bad workmanship.</u>	70.00
<u>Lavatory pipes - Bad workmanship.</u>	250.00
<u>Strainer box - Faulty material.</u>	250.00
<u>L.P. cylinder plug in cylinder wall - Faulty material.</u>	30.00
<u>Guide slippers - Faulty material.</u>	975.00
<u>Exhaust deck line - Bad workmanship.</u>	30.00
<u>Gas vent line - Bad workmanship.</u>	45.00
Total	<u>\$2440.00</u>

COPY.

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(14)

The above prices are in my opinion fair and reasonable.

Further items, not included in above, which have not been dealt with at this time:-

One wire fall for 15 ton derrick and two wire falls for 3 ton derricks.

Rocker shaft for 12" kerosens pump.

Tiling in midship pantry.

Refrigerator motor starter.

*J. H. Wood*

SURVEYOR.



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