

## REPORT OF SURVEY FOR REPAIRS, &amp;c., OF ENGINES AND BOILERS

(Received at London Office)  
 Date of writing Report 17th Dec. 53 When handed in at Local Office 19 Port of HAMBURG 22 JAN 1954  
 in Book. Survey held at HAMBURG. Date First Survey 20th Oct. Last Survey 7th Dec. 53  
 (No. of Visits 22)

on the Machinery of the ~~Wood~~ ~~Iron~~ Steel S.S. "TRADER"  
 Gross 6143 Vessel built at Glasgow By whom C. Connell & Co. Ltd., Year. Month. When 1940 12  
 Net 3692 Engines made at Glasgow By whom D. Rowan & Co. Ltd., When 1940 12  
 Per Rule 524 Boilers, when made (Main) 1940 (Aux. 1940)  
 Main Boilers 2DB(Spt) Owners Charente S.S. Co. Ltd., Owners' Address (if not already recorded in Appendix to Register Book.)  
 8208 T. & J. Harrison, Ltd., Port Liverpool Voyage -  
 Donkey Boilers 1 Managers If Surveyed Afloat or in Dry Dock Both  
 Pressure— If Surveyed Afloat or in Dry Dock Both  
 Main Boilers 210lbs Howaldtswerke A.G.,  
 Donkey Boilers 120lbs

Report No. Port Docking, TS, LMC, Repairs,  
 Particulars of Examination and Repairs (if any) O.F. Conversion  
 Special Surveys, when held, must be reported in detail and serially in the terms of the Rules. State clearly the nature and extent of examinations and subsequent repairs. Repairs on the cause of which must be stated should be separated from repairs due to other causes; and besides the body of the report, should be briefly summarised at the end of the report. State also the dates and of any letters respecting this case.

age 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 why they were declined.  
 damage report made by anyone else? If so, by whom?  
 Surveyor personally go inside each Main Boiler separately and make a thorough examination at this time? yes

Aux. yes  
 state for what reasons? What parts of the Boilers could not be thus thoroughly examined?

special means, in the absence of internal examination, were adopted by the Surveyor to assure himself of the thorough efficiency of those parts of each Boiler?  
 latest date of internal examination of each boiler: p. 23.11.- s. 24.11.- aux. 28.11.53 Present condition of funnel(s) efficient

Surveyor examine the Safety Valves of the Main Boilers? yes To what pressure were they afterwards adjusted under steam? 210 lbs/sq.in.  
 Surveyor examine the Safety Valves of the Donkey Boilers? yes To what pressure were they afterwards adjusted under steam? 120 lbs/sq.in.

Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? yes and of the Donkey Boilers? yes  
 Surveyor examine the drain plugs of the Main Boilers? none and of the Donkey Boilers? none  
 Surveyor examine all the mountings of the Main Boilers? yes and of the Donkey Boilers? yes

screw shaft now been drawn and examined? yes Has it a continuous liner? yes Is an approved oil retaining appliance fitted at the after end? -  
 shaft now been changed? yes If so, state reasons Owners arrangement Has the shaft now fitted been previously used? no Has it a continuous liner? yes  
 approved oil retaining appliance fitted at the after end? State date of examination of Screw Shaft 16.11.53 State the wear down in the

in bush close fit Is electric light and/or power fitted? yes If so, did the Surveyor examine the generators, motors, switchgear cables and fuses? yes  
 insulation resistance of the generators, circuits and apparatus been tested and found to be not less than 100,000 ohms?  
 parts, when referred to by numbers, should be counted from forward. Auxiliary machinery should be referred to by position in Machinery Space.

Survey is not complete, state what arrangements have been made for its completion and what remains to be done Complete  
 DONE:-  
 Docking:-  
 Vessel placed in drydock.

Examined propeller, screw shaft, stern bush, cocks, valves and outside fastenings of sea connections and found or placed in satisfactory condition.

Machinery:-  
 The following machinery parts opened up, examined and placed in satisfactory condition:-  
 Main Engine HP and IP, and LP cylinders and pistons, valves and valve casings, crossheads,

guides, top and bottom end bearings and their pins, connecting rods, main bearings and journals, eccentrics and straps, thrust- intermediate shafts and their bearings, all attached and independent pumps, both steam generator engines, main and auxiliary condensers (tested), feed heaters and evaporator (tested), cocks, valves and strainers of pumping arrangement.

p.t.o.  
 General Observations, Opinion, and Recommendation:-  
 (State clearly what alteration, if any, is suggested to be made in the existing classification of the vessel's machinery in the Register Book, consequent upon this survey, and also any alteration required to be made in the records of the vessel's machinery, boilers, working pressures, etc.)

The Machinery of this vessel, as now seen, is in efficient condition and eligible, in my opinion, remain as now classed with fresh record of TS CL N 11,53, \* LMC 12,53 and the notation "Fitted for oil 12,53 F.P. above 150°F.

O.F. Conv. £ 50. 0. 0.  
 Fee (per Section 23) LMC 46. 5. 0.  
 PS 26. 5. 0.  
 Repair Fee (per Section 23.) Elec. £ 7. 10. 0.  
 Expenses (if applicable) 11. 0. 0.

Received by me, 19  
 Committee's Minute  
 ned

+ LMC 12.53  
 S(N) 11.53 Fitted for oil fuel  
 12.53 F.P. above 150°F

W. O. Pahlmann  
 Engineer Surveyor to Lloyd's Register of Shipping.  
 CERTIFICATE WRITTEN  
 Lloyd's Register of Shipping  
 005625-005630-005631



" T R A D E R "

Machinery:- (contd.)

Representative lengths of main and auxiliary steam pipes, removed, annealed and tested as per Rule Requirements.

Boiler Survey:-

Both double ended main- and auxiliary boiler examined internally and externally with superheaters, mountings, manholes, doors and their fastenings and placed in satisfactory condition. Safety valves of all three boilers adjusted under steam as noted. Oil fuel burning installation examined under working condition (see O.F. conversion) and found good. Fire fighting appliances verified, control rods checked.

Electrical Installation:- (25.5 KW). Generators, motors, switchboard, cables and fittings examined, and on completion of repairs, the insulation resistance measured and all found or placed in satisfactory condition.

Trials:-

On completion of repairs main and essential auxiliary machinery including windlass and steering engine examined under full load dock trials and found in good order. Main and auxiliary boilers operating under natural draught condition.

Wear & Tear Repairs:-

Docking:-

Minor repairs to sea-injection and discharge valve effected. Stern bush rewooded round. A new screwshaft (Owners arrangement) has been fitted now (marked LLOYD'S No. 25200 J 4012 HA I 21973) and the original screwshaft examined, found efficient and placed in spare. A new cast iron (tested) sea-injection valve fitted to the aft port ship side with control rod to main deck, using as sea-valve for diesel driven emergency fire service pump.

Machinery:-

Main Engine: HP valve rod slightly skimmed. All crosshead pins skimmed, bearings rebored. HP piston valve junk ring studs renewed. All rod packings overhauled and adjusted. Two main bearing halves and one eccentric strap half re-metalled. Holding down bolts on main engine and thrust block tested and partly tightened up. Reversing engine completely overhauled.

Auxiliaries: Auxiliary condenser a number of tubes renewed, two new cast iron covers fitted. Several piston rings for steam and liquid sides of independent pumps renewed and also suction and delivery valves overhauled or partly renewed. On both steam generator engines the slide casings rebored and valves renewed.

Main and auxiliary circulating pumps impeller sealing rings renewed and bearings remetalled. Both piston rods of the windlass renewed by bronze. A number of valves and pipes on bilge and ballast lines overhauled or renewed. Also several steam stop valves of main and auxiliary steam lines overhauled.

Boilers:-

Measurements on all boiler furnaces taken and found satisfactory. On both main boilers all plain tubes renewed, supplied by the Owners and stated to be of tested material.

Port Boiler:- port furnace forward and aft 140 tubes, centre furnace forward and aft 136 tubes, starboard furnace forward and aft 140 tubes.

Starboard Boiler:- same numbers in same furnaces.

Two side stays of inboard furnace starboard boiler renewed of tested material.

All superheater headers and elements removed ashore for overhauling. Headers cleaned and dressed up in way of element seat landings, element ends partly renewed and all hydraulically tested on completion. Additional boiler brickwork fitted for oil fuel burning. (Natural draught, Owners arrangement). Several superheater drain pipes renewed. Funnel shortened approximately 5 metres, Owners arrangement. Minor repairs to boiler mountings effected.

" T R A D E R ".

Wear & Tear Repairs:- (contd.)

Electrical Installation:-

On completion of repairs the insulation resistance measured and found in accordance with

Rule Requirements. The following circuits have been renewed = MK cables:-

- 1) Main switchboard - boiler room distribution board and new light points (O.F. Conv.)  
1 x 4 sq. mm - 92 metres.
- 2) Forecastle distribution board to Suez searchlight 1 x 4 sq. mm - 16 metres.
- 3) Main switchboard - aft ship distribution board 1 x 25 sq. mm - 75 metres.
- 4) Aft ship distribution board - back and accommodation 1 x 2.5 sq. mm - 67 metres.
- 5) Also new telephone cable wheel house - engine room 3 x 0.75 sq. mm, 21 metres.

Oil Fuel Conversion:-

The vessel has been converted to oil fuel burning at this time and the following tanks have been arranged to carry oil fuel:-

Double bottom tanks Nos. 3 and 4 port and starboard (now named 2a and 3); crossbunkers port, centre and starboard; side bunkers port and starboard; and port and starboard settling tanks placed behind the side bunkers. All tanks are fitted with heating coils of tested material ~~material~~ and the returns of those coils are led - after passing an distillate cooler - to an observation tank placed under the main condenser and fitted with illuminated sight glasses. The last frame in No. 4 (now named 3) double bottom tank is the existing cofferdam. Ballast lines from double bottom tanks Nos. 3 and 4 (now named 2a and 3) removed and replaced by steel in the new piping tunnel in centre crossbunker. The overflow from settling tanks is connected to the double bottom tank No. 3, also fitted with illuminated sight glasses and non-return valves. All bunkers fitted with sufficient air and sounding pipes, bunker valves with extending spindles to deck. All bunkers are fitted with pneumatics. Satisfactory oil-bilges are fitted to cargo hold, boiler and engine room. Bilge lines from gutterways and oily-bilges connected to transfer pump suction. The discharge of the transfer pump is connected to a new oil separator (supplied by the Owners) in engine room starboard forward side. Sufficient steam smothering, transfer pump and pressure units fitted with control rods to deck. New fire extinguishers - 6 in main boiler room, 2 in auxiliary boiler room and 2 in engine room - and water hose connections in boiler and engine rooms, also sand boxes are supplied. The boiler fronts removed and new boiler fronts of Walsend-Howden type have been installed on both main- and also auxiliary boilers in tween deck. Main and auxiliary boiler burning under natural draught condition. The new pressure pump units and heaters, transfer pump and oil separator are placed in the forward starboard engine room and all is satisfactorily connected with steel pipes to the oil fuel arrangement. On completion the oil fuel arrangement has been satisfactorily tested under natural draught conditions and found good. Steam smothering verified, control rods checked and all found in good condition. All lead pipes and woodwork removed and replaced by steel, funnel damper locked by E.W.

The complete oil fuel conversion is satisfactorily installed in accordance with the approved plans and Rule Requirements.

Note:-

Also a new hand started diesel driven emergency fire service pump has been installed in the steering engine flat. (Owners supply). The sea-suction valve (80 mm) is placed on port aft ship side in way of aft tunnel well, and connected with extending spindle to deck, the water supply lead to deck service line.

Additional Machinery:-

p.t.o.

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Additional Machinery:-

Oil fuel heater No. 1 LLOYD'S steam space test 430 lbs

oil space test 400 lbs

No. 346 11.2.53 No. 25903

F. 2999 X 1521.

Oil fuel heater No. 2 21 x 1421 RH

LLOYD'S steam space test 430 lbs

oil space test 400 lbs

No. 345 21.1.53 No. 1025896 F 2999

Pressure pumps No. 112 Oil side 258446 test 400 lbs 17.11.53

steam side 258445 test 500 lbs 18.11.53

Pressure filter F 48, F 2999 1 3/4 D 709

test 400 lbs LLOYDS 27.2.53

Oil separator 0/47/53 Serial No. 674

body test 40 lbs

19.5.53

coils test 400 lbs

Fuel heater for auxiliary boiler (tween deck) F 112 F 2999 tested 400 lbs LLOYD'S 19.11.53

Diesel driven emergency fire pump:

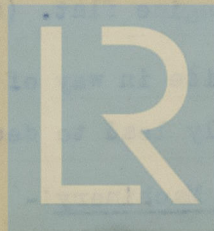
Makers: Russel, Newberry, Dagenham

Essex & Co. Ltd., England.

No. 10 F 7897 15 PS at 1300 Rev.

pump: HAMWORTHY 104654.

W. O. G.



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