

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office TUE JUN 26 1923

Date of writing Report 19 June 1923 When handed in at Local Office 25 June 19 Port of NEWCASTLE-ON-TYNE

No. in Survey held at WALKER. Date, First Survey 17<sup>th</sup> January 23 Last Survey 20 June 1923  
Reg. Book. (Number of Visits 38)

on the STEEL SCREW STEAMER HADRIAN Tons } Gross  
Net

Built at WALKER. By whom built SWAN, HUNTER, WIGHAM, RICHARDSON Yard No. 1146 When built 1923.

Engines made at WALKER By whom made S. H. W. R. Ld Engine No. 1146 when made 1923

Boilers made at WALKER By whom made S. H. W. R. Ld Boiler No. 1146 when made 1923.

Registered Horse Power Owners TYNE-TEES STEAM SHIPPING CO LD Port belonging to NEWCASTLE

Nom. Horse Power as per Rule 534 Is Refrigerating Machinery fitted for cargo purposes NO Is Electric Light fitted YES

ENGINES, &c.—Description of Engines 4 Cylinders, Quadruple. No. of Cylinders 4 No. of Cranks 4

HP 24. 1. M/A 33. 2. M/A 48. LP 71 Length of Stroke 45 Revs. per minute BUILT. No. of Cranks 4

Dia. of Crank shaft journals as per rule 13.12" Dia. of Crank pin 13.3/4" Crank webs Mid. length breadth 203/4" Thickness parallel to axis shrunk 6"

Diameter of Thrust shaft under collars as per rule 13.12" Diameter of Tunnel shaft as per rule 12.5" Diameter of Screw shaft as per rule 13.456" Is the Screw shaft as fitted 14.148"

fitted with a continuous liner the whole length of the stern tube YES Is the after end of the liner made watertight in the propeller boss YES

If the liner is in more than one length are the joints burned If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with plastic material insoluble in water and non-corrosive YES

If two liners are fitted, is the shaft lapped or protected between the liners Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated NONE.

Pitch of Propeller 18-3" No. of Blades 4 State whether Moveable NO. Total Surface 76 sq. feet.

No. of Feed Pumps fitted to the Main Engines 2 Diameter of ditto 37/8" Stroke 24 Can one be overhauled while the other is at work YES

No. of Bilge Pumps fitted to the Main Engines 2 Diameter of ditto 4 1/2" Stroke 24 Can one be overhauled while the other is at work YES

Total number and size of power driven Feed and Bilge Auxiliary Pumps WEIRS, FEED (2) centrifugal Cit Pump, 13" BAL. 9x11x10. GSP 9x6x9

No. and size of Pumps connected to the Main Bilge Line G. S. P. DUPLEX 8x10 1/2x22, BALLAST. 9x11x10

No. and size of Ballast Pumps DUPLEX. 9. x. 11 x 10 No. and size of Lubricating Oil Pumps, including Spare Pump

Are two independent means arranged for circulating water through the Oil Cooler No. and size of suction connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room 2 1/3 BOILER R. 3 1/2 and in Holds, &c. A. 2 1/3" No. 2, 2 1/2, No. 1, 2 1/2

Tunnel well 1 of 2 1/2.

No. and size of Main Water Circulating Pump Bilge Suctions 9" BILGE INJECTION CIR. PUMP No. and size of Donkey Pump Direct Suctions to the Engine Room Bilges 1 of 4

Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes YES

Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges YES

Are all connections with the sea direct on the skin of the ship YES Are they Valves or Cocks BOTH

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates YES Are the Discharge Pipes above the deep water line YES

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel YES Are the Blow Off Cocks fitted with a spigot and brass covering plate YES

What Pipes are carried through the bunkers Hold Suctions How are they protected CASING.

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times YES

Is the arrangement of Valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another YES Is the Screw Shaft Tunnel watertight YES Is it fitted with a watertight door YES worked from DECK.

MAIN BOILERS, &c.—(Letter for record S.) Total Heating Surface of Boilers 7953 sq. ft.

Is Forced Draft fitted YES No. and Description of Boilers 3. S. E. CYL. MULTI Working Pressure 210 lb

IS A REPORT ON MAIN BOILERS NOW FORWARDED? YES approved. 4. 1. 23

IS A DONKEY BOILER FITTED? NO If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting NO Main Boilers YES Auxiliary Boilers Donkey Boilers

General Pumping Arrangements ENGINE ROOM YES Oil fuel Burning Piping Arrangements NONE

SPARE GEAR. State the articles supplied:—

Top end bolts and nuts two bottom end bolts and nuts two main bearing bolts and nuts  
Set of Coupling bolts and nuts. Set of Feed and Bilge pump Valves, 1 eccentric Strap complete.  
Spare centrifugal pump Impeller and Spindle. Spare propeller, assorted bolts, nuts & Iron, also  
Propeller shaft (G.L) about 20 ferrules for Condensers, 6 palm bolts & nuts, 12 gauge flosses & packing rings,  
2 Check Valves for Chests, 1 Set Feed donkey Valves & Seats. 1 Set Ballast donkey Valves & Seats, 1 pair Connecting Rod bottom end  
hoses, 50 Condenser tubes 1 air pump Rod & guide 1/2 set air pump Valves, 9 Boiler tubes 10% Fire bars (34)  
2 Escape Valve Springs 2 Safety Valve Springs, 1 Set General Service pump Valves & Seats 1 Set Sanitary pump  
Valves & Seats, 1 set fresh water pump Valves & Seats. General Engine Room Tools and stores.

The foregoing is a correct description.

Signature: J. W. Hunter & Wigham Richardson, Ltd. Manufacturer.



208823-008830-0050

1923  
 During progress of work in shops -- }  
 Dates of Survey while building }  
 During erection on board vessel --- }  
 Total No. of visits 38

HP Cyl. TESTED. 65th. MD. 60th LP 25th. May. 7. 23  
 Dates of Examination of principal parts - Cylinders 12.4.23 30.4.23 27.4.23 Slides May-June 1923  
 Covers 7.5.23 7.6.23 Pistons 25.4.23 Rods 25.4.23 19.4.23  
 Connecting rods 25.4.23 Crank shaft 1. May 23 Thrust shaft 24.4.23  
 Tunnel shafts 7.5.23 Screw shaft 27 April 23 Propeller 8.5.23 13.6.23 23.4.23  
 Stern tube 23.4.23 Engine and boiler seatings 8.5.23 Engines holding down bolts 16.5.23 - 7.6.23  
 Completion of pumping arrangements 13.6.23 14.6.23 Boilers fixed 16.5.23 7.6.23 Engines tried under steam 7.6.23 / 14.6.23  
 Completion of fitting sea connections 13.6.23 14.6.23 Stern tube 13.6.23 13.6.23 Screw shaft and propeller 15.5.23 13.6.23  
 Main boiler safety valves adjusted 7-6.23 Thickness of adjusting washers FB. P 3/8 A 3/8. S B. P 1/2 S 3/8. P B. P 3/8 S 3/8  
 Material of Crank shaft STEEL Identification Mark on Do. LLOYDS 6466.N.JD/LGS 7.5.23  
 Material of Thrust shaft STEEL Identification Mark on Do. 6466.N.JD/LGS  
 Material of Tunnel shafts STEEL Identification Marks on Do. 6466.N.JD-LGS 7.5.23  
 Material of Screw shafts WORKING - 1 SPARE SHAFT / STEEL Identification Marks on Do. 6466.N.JD.LGS  
 Material of Steam Pipes IRON-STEEL Test pressure 630 lb. Date of Test 1.6.23 23.6.23 9.5.23  
 Is an installation fitted for burning oil fuel NO Is the flash point of the oil to be used over 150°F.  
 Have the requirements of the Rules for carrying and burning oil fuel been complied with NONE  
 Is this machinery duplicate of a previous case NO If so, state name of vessel NONE

General Remarks (State quality of workmanship, opinions as to class, &c.)

The Engine and Boilers built under Special Survey - The material and workmanship found good and efficient.  
 The machinery satisfactorily fitted up on board the vessel. tested under steam (vessel at moorings) and found satisfactory.  
 The vessel subsequently proceeded on sea trials, the machinery working satisfactorily.  
 In my opinion the machinery of this vessel is now eligible for the notification of L M C. 6. 23 (IN RED) to be made in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + L M C 6.23. FD. CL.

JWD. ARB  
 27/6/23

L. G. Shallcross.  
 Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 6 : 0 :  
 Special ... £ 101 : 14 :  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, 20/6/23  
 When received, 27/6/23

Committee's Minute FRI. 29. JUN. 1923

Assigned + L m c 6.23  
 F. D. C. L.

Certificate to be sent to Newcastle

The Surveyors are requested not to write on or below the space for Committee's Minute.

CERTIFICATE WRITER

