

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

TUE 22 APR. 1924

Date of writing Report 19 When handed in at Local Office 16-4-24 Port of Middlesbrough  
 No. in Survey held at South Bank Date, First Survey 10th April 1923 Last Survey 12th April 1924  
 Reg. Book. on the machinery of the steel screw steamer "ALACRITY" (Number of Visits 42)  
 Built at South Bank By whom built Smith's Dock Company Ltd. Yard No. 781 When built 1924  
 Engines made at South Bank By whom made Smith's Dock Company Engine No. 237 when made 1924  
 Boilers made at Sunderland By whom made N.E. Mains Eng. Co. Ltd. Boiler No. 2523 when made 1924  
 Registered Horse Power Owners Port belonging to  
 Nom. Horse Power as per Rule 263 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

## ENGINES, &c.—Description of Engines

Triple expansion

Dia. of Cylinders 21-35-57 1/2 Length of Stroke 42 Revs. per minute No. of Cylinders 3 No. of Cranks 3  
 Dia. of Crank shaft journals as per rule 11.4 as fitted 11.5 Dia. of Crank pin 11.5 Crank webs Mid. length breadth 7 1/4 Thickness parallel to axis 7 1/4  
 as per rule 11.4 as fitted 11.5 Diameter of Tunnel shaft as per rule 10.86 as fitted 11 Diameter of Screw shaft as per rule 13.25 as fitted 13.25  
 Is the Screw shaft 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 In one length If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a 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 No

Pitch of Propeller 15-2 No. of Blades four State whether Moveable No Total Surface 75 sq. feet  
 Length of Stern Bush 4-11 1/2 Diameter of Propeller 16-0

No. of Feed Pumps fitted to the Main Engines 2 Diameter of ditto 3 1/4 Stroke 22 Can one be overhauled while the other is at work Yes  
 No. of Bilge Pumps fitted to the Main Engines 2 Diameter of ditto 3 1/4 Stroke 22 Can one be overhauled while the other is at work Yes

Total number and size of power driven Feed and Bilge Auxiliary Pumps 1 @ 6x4x6 1 @ 10x11x10  
 No. and size of Pumps connected to the Main Bilge Line One 10x11x10  
 No. and size of Ballast Pumps One 10x11x10 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 @ 3 1/4 1 @ 3 and in Holds, &c. 2 @ 3 in No 1 & 2 holds 4 @ 2 1/2 in No 3 hold. Tunnel well 1 @ 2 1/4

No. and size of Main Water Circulating Pump Bilge Suctions One 6 No. and size of Donkey Pump Direct Suctions to the Engine Room Bilges One 3 1/2 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 No (old rule)  
 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 or below the deep water line above

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 suction to forward holds How are they protected wood ceiling  
 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 Top platform

## MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 4462 sq. ft.

Is Forced Draft fitted No No. and Description of Boilers Two single ended mains Working Pressure 180  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes, see Sunderland Rpt No 28717  
 IS A DONKEY BOILER FITTED? No If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting Main Boilers Yes Auxiliary Boilers Donkey Boilers  
 General Pumping Arrangements Yes Oil Fuel Burning Piping Arrangements

SPARE GEAR. State the articles supplied:— One cast iron propeller, two each of connecting rod top and bottom end and main bearing bolts & nuts, one set of coupling bolts & nuts, one set of feed & bilge pump valves, one set of main and donkey chuck valves, one safety valve spring, crank shaft gauge. A quantity of assorted bolts & nuts & iron of various sizes

The foregoing is a correct description.  
 For Smiths Dock  
 W. P. Scott  
 Manufacturer.



During progress of work in shops -- } 1923, Apr. 10, 11, 19, 24, 25, May 4, 8, 11, 17, 23, 28, June 7, Oct 11, 21 (1924) Jan 23, 28, Feb 2, 15  
 19, 29, May 3, 7, 7, 10, 11, 12, 13, 14, 17, 19, 21, 25, 27, 28, 31, Apr. 1, 2, 4, 8, 10, 11, 12  
 Dates of Survey while building }  
 During erection on board vessel --- }  
 Total No. of visits 42

Dates of Examination of principal parts - Cylinders 17-5-23 Slides 17-5-23  
 Covers 17-5-23 Pistons 17-5-23 Rods 17-5-23  
 Connecting rods 17-5-23 Crank shaft *Lith* 22-3-23 Thrust shaft *Lith* 23-3-23  
 Tunnel shafts *Lith* 22-3-23 Screw shaft *Lith* 22-3-23 Propeller 19-2-24  
 Stern tube 19-2-24 Engine and boiler seatings 29-2-24 Engines holding down bolts 28-3-24  
 Completion of pumping arrangements 8-4-24 Boilers fixed 17-3-24 Engines tried under steam 8-4-24  
 Completion of fitting sea connections 29-2-24 Stern tube 10-3-24 Screw shaft and propeller 11-3-24  
 Main boiler safety valves adjusted 8-4-24 Thickness of adjusting washers *Port boiler PV 1/4 S.V. 3/8* *Starboard boiler PV 7/16 S.V. 1/32*  
 Material of Crank shaft *Ingot steel* Identification Mark on Do. 514  
 Material of Thrust shaft *Ingot steel* Identification Mark on Do. 542  
 Material of Tunnel shafts *Ingot steel* Identification Marks on Do. 543  
 Material of Screw shafts *Ingot steel* Identification Marks on Do. 541  
 Material of Steam Pipes *Solid drawn copper* Test pressure 400 lbs ✓ Date of Test 1-4-24 ✓  
 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 ✓  
 Is this machinery duplicate of a previous case *Yes* ✓ If so, state name of vessel *S.S. "Crackshot"* ✓

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel has been built under special survey. The materials and workmanship are sound & good. The engines, boilers and auxiliaries were examined under steam and all found satisfactory.*

*The machinery is now in a good and safe working condition and renders the vessel eligible in our opinion to have the notation*  
**+ LMC 4.24 in the Register Book**

*Note: This vessel is fitted with Electric Light & "Wheels"*

It is submitted that this vessel is eligible for THE RECORD. + LMC 4.24. CL

*W.D. 23/4/24*

*W.D. Morrison & A.D. Morrison*  
 Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 4 : 0 0 ✓ When applied for,  
 Special ... £ 37 : 1 0 ✓ 17.4.1924  
 Donkey Boiler Fee ... £ : : ✓  
 Travelling Expenses (if any) £ : : ✓ 2.00.1924

Committee's Minute WFD. 23 APR 1924  
 Assigned + LMC 4.24  
 C.L.



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