

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

9 JUN 1926

Date of writing Report 7<sup>th</sup> June, 1926 When handed in at Local Office 8<sup>th</sup> June, 1926 Port of Aberdeen  
 No. in Survey held at Aberdeen Date, First Survey 11<sup>th</sup> Jan'y, 1926 Last Survey 28<sup>th</sup> May, 1926  
 Reg. Book. on the STEEL S.S.K. "ARUM" (Number of Visits 21)  
 Built at Aberdeen By whom built Hall, Russell & Co. Ltd. Yard No. 689 Tons { Gross 194  
 Engines made at Aberdeen By whom made Hall, Russell & Co. Ltd. Engine No. 689 Net 72  
 Boilers made at Aberdeen By whom made Hall, Russell & Co. Ltd. Boiler No. 689 When built 1926.5  
 Registered Horse Power 78 Owners Irwin & Johnson (South Africa) Ltd. Port belonging to Aberdeen  
 Nom. Horse Power as per Rule 78 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted yes.

## ENGINES, &amp;c.—Description of Engines

Triple Expansion

Dia. of Cylinders 12"-20"-34" Length of Stroke 24" Revs. per minute 115 No. of Cylinders 3 No. of Cranks 3  
 Dia. of Crank shaft journals as per rule 6.43" as fitted 6.34" Dia. of Crank pin 6.34" Crank webs Mid. length breadth 10" Thickness parallel to axis 4.34"  
 Diameter of Thrust shaft under collars as per rule 6.43" as fitted 6.34" Diameter of Tunnel shaft as per rule 6.13" as fitted 6.2" Diameter of Screw shaft as per rule 6.824" as fitted 7.2" 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 no. 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 charged.  
 If two liners are fitted, is the shaft lapped or protected between the liners no. Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated no. Length of Stern Bush 2'-6" Diameter of Propeller 8'-4"  
 Pitch of Propeller 11'-6" No. of Blades 4 State whether Moveable no. Total Surface 32 square feet.  
 No. of Feed Pumps fitted to the Main Engines 2 Diameter of ditto 2 3/8" Stroke 12" Can one be overhauled while the other is at work yes.  
 No. of Bilge Pumps fitted to the Main Engines 2 Diameter of ditto 2 3/8" Stroke 12" Can one be overhauled while the other is at work yes.  
 Total number and size of power driven Feed and Bilge Auxiliary Pumps Two 5 1/2" x 3 1/2" x 5"  
 No. and size of Pumps connected to the Main Bilge Line One 5 1/2" x 3 1/2" x 5"  
 No. and size of Ballast Pumps None No. and size of Lubricating Oil Pumps, including Spare Pump None  
 Are two independent means arranged for circulating water through the Oil Cooler None No. and size of suctions connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room 2" 2" & Ejector 2" and in Holds, &c. 1" 2" to Fish Room.

No. and size of Main Water Circulating Pump Bilge Suctions 1" 2" No. and size of Donkey Pump Direct Suctions 1" 2"  
 to the Engine Room Bilges 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 yes STRAIGHT TAIL PIPES (NOT PRACTICABLE, 6 STRUMS FITTED WITH MUD BOX ON MAIN LINE)  
 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 Pipes How are they protected wood 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 none Is it fitted with a watertight door no worked from no

MAIN BOILERS, &c.—(Letter for record no)Total Heating Surface of Boilers 1429 sq. ft.

Is Forced Draft fitted no No. and Description of Boilers One Single Ended Working Pressure 180 lbs./sq. in.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? yesIS A DONKEY BOILER FITTED? noIf so, is a report now forwarded? no

PLANS. Are approved plans forwarded herewith for Shafting no Main Boilers yes Auxiliary Boilers no Donkey Boilers no  
 (If not state date of approval)

General Pumping Arrangements yes Oil Fuel Burning Piping Arrangements no

SPARE GEAR. State the articles supplied:—All as per Rule requirements and, in addition, one propeller, one set of air pump valves, one set of circulating pump valves, one safety valve spring, two check valves.

The foregoing is a correct description,  
 FOR HALL, RUSSELL & CO., LTD.

James J. Hunter DIRECTOR,

Manufacturer.



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Lloyd's Register  
 Foundation

002770-002783-0227

During progress of work in shops - - 1926: JAN. 11. 25. FEB. 2. 26. MAR. 1. 12. 25. APR. 7. 8. 15. 19. 26.  
 Dates of Survey while building 1926: APR. 28. MAY. 4. 7. 10. 11. 24. 28.  
 During erection on board vessel - - -  
 Total No. of visits 21.

Dates of Examination of principal parts - Cylinders	<u>12.3.26.</u>	Slides	<u>15.4.26.</u>
Covers	<u>15.4.26.</u>	Pistons	<u>15.4.26.</u>
Connecting rods	<u>15.4.26</u>	Crank shaft	<u>Finished at Forge &amp; 1.3.26</u>
Tunnel shafts	<u>8.4.26</u>	Screw shaft	<u>8.4.26</u>
Stern tube	<u>30.3.26</u>	Engines holding down bolts	<u>4.5.26</u>
Completion of pumping arrangements	<u>24.5.26</u>	Boilers fixed	<u>10.5.26</u>
Completion of fitting sea connections	<u>26.4.26</u>	Stern tube	<u>7.4.26</u>
Main boiler safety valves adjusted	<u>11.5.26</u>	Thrust shaft	<u>8.4.26</u>
Material of Crank shaft	<u>Steel</u>	Propeller	<u>8.4.26</u>
Material of Thrust shaft	<u>Steel</u>	Engines tried under steam	<u>11.5.26</u>
Material of Tunnel shafts	<u>Steel</u>	Screw shaft and propeller	<u>19.4.26</u>
Material of Screw shafts	<u>Iron</u>	Thickness of adjusting washers	<u>3/8" 5/8"</u>
Material of Steam Pipes	<u>No copper</u>	Identification Mark on Do.	<u>LLOYD'S N°1304 A.T.T. 5.2.26.</u>
Is an installation fitted for burning oil fuel	<u>No</u>	Identification Mark on Do.	<u>LLOYD'S N°1305 H.C.F. 8.4.26</u>
		Identification Marks on Do.	<u>LLOYD'S N°1306 H.C.F. 8.4.26</u>
		Identification Marks on Do.	<u>LLOYD'S N°1307 H.C.F. 8.4.26</u>
		Test pressure	<u>360 lbs./sq. in.</u>
		Date of Test	<u>4.5.26</u>
		Is the flash point of the oil to be used over 150°F.	<u>✓</u>

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 V.C.K. "NERINE" Abn. Rpt. N°14089.

**General Remarks** (State quality of workmanship, opinions as to class, &c. The machinery of this vessel has been constructed under Special Survey in accordance with the Rules and approved plans; the materials and workmanship are good. The machinery has been efficiently installed on board the vessel, examined under working conditions at the wharf and found satisfactory, and is eligible, in my opinion, for classification, and to have the record L.M.C. 5.26. C.L. in the Register Book.

It is submitted that  
 this vessel is eligible for  
 THE RECORD. + LMC 5.26. CL.

*[Signature]*  
 10/6/26

The amount of Entry Fee ... £ 2 : 0 : 0 When applied for,  
 Special ... £ 19 : 10 : 0 8.6.1926  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : : 10/6/26

*[Signature: H.B. Forster]*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 11 JUN 1926  
 Assigned + L.M.C. 5.26  
*[Signature]*