

Rpt. 4.

REPORT ON MACHINERY.

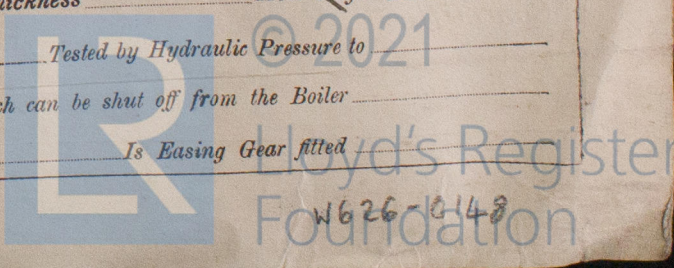
No. 8024
TUE. 6-NOV. 1917

Date of writing Report Aug. 21st 1917 When handed in at Local Office Aug. 21st 1917 Port of DUNDEE
No. in Survey held at Dundee Date, First Survey Feb. 9th 1914 Last Survey Aug. 20th 1917
Reg. Book. on the S. TRAWLER "LEWIS ROATLEY" (Number of Visits 29)

Master By whom built By whom made when made 1917-11
Engines made at Dundee By whom made Hessio. Cooper & Co. Ltd (189) when made 1914-11
Boilers made at Hull By whom made P. Holmes & Co. Ltd when made 1917-11
Registered Horse Power 84.33 Owners The Admiralty Port belonging to
Nom. Horse Power as per Section 28 84.33 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Triple Expansion, Surface Condensing No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 13" 23" 34" Length of Stroke 26" Revs. per minute 114 Dia. of Screw shaft as per rule 4.9 Material of screw shaft 5.5 in
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 water tight
in the propeller boss yes If the liner is in more than one length are the joints burned yes 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 yes Length of stern bush 2'-11 1/2"
Dia. of Tunnel shaft as per rule 4.04 Dia. of Crank shaft journals as per rule 4.39 Dia. of Crank pin 4 1/2" Size of Crank webs 4 1/2" x 4 1/2" Dia. of thrust shaft under
collars 4 1/2" Dia. of screw 9'-4 1/2" Pitch of Screw 11'-0" No. of Blades 4 State whether moveable no Total surface 33 sq. ft.
No. of Feed pumps one Diameter of ditto 2 5/8" Stroke 14 3/4" Can one be overhauled while the other is at work yes
No. of Bilge pumps one Diameter of ditto 2 5/8" Stroke 14 3/4" Can one be overhauled while the other is at work yes
No. of Donkey Engines one 3" cylinder Sizes of Pumps 6", 4 1/2" x 6" duplex No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room Two 2" dia. In Holds, &c. Two 2" dia. in each compartment
All suction also connected to ejector
No. of Bilge Injections one size 3 1/2" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 3" cylinder
Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes Are the sluices on Engine room bulkheads always accessible none
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 Forward suction How are they protected Strong casing of fixed iron
Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes
Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes
Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from yes

BOILERS, &c.—(Letter for record S) Manufacturers of Steel
Total Heating Surface of Boilers 440 sq. ft. Is Forced Draft fitted no No. and Description of Boilers
Working Pressure 200 Tested by hydraulic pressure to Date of test No. of Certificate
Can each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to
each boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear
Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates
Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams
long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps
Per centages of strength of longitudinal joint Working pressure of shell by rules Size of manhole in shell
Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter
Length of plain part Thickness of plates Description of longitudinal joint No. of strengthening rings
Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom
Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules
Material of stays Area at smallest part Area supported by each stay Working pressure by rules End plates in steam space:
Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays
Area at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom
Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules
Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays
Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and
thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each
Working pressure by rules Steam dome: description of joint to shell % of strength of joint
Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes
Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed
SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to
Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler
Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 $\frac{1}{2}$ inch end bolts & nuts. 2 Bottom end bolts & nuts. 2 main bearing bolts & nuts. One set coupling bolts. One set feed pump valves. One set bilge pump valves. One set air pump valves. One condenser tubes & 2 ferrules. Six pump ring studs. Two valves for donkey pump, one main & one donkey check valve, one main safety valve spring. 2 escape valve springs, one set of fire bars, & a quantity of bolts & nuts & of various sizes.

The foregoing is a correct description,
For COOPER & GREIG LIMITED.

Thomas Cooper Manufacturer.
DIRECTOR

Dates of Survey while building { During progress of work in shops -- FEB. 9, MAR. 2, 5, 12, 13, 16, 22, 28, APR. 3, 6, 14, 18, 24, MAY 1, 8, 16, 21, 29, 31, JUNE 4, 9, 15, 18, 25, JULY 4, 12, 31, AUG. 20. }
During erection on board vessel -- see Hull Rpt 30228-
Total No. of visits 29. Is the approved plan of main boiler forwarded herewith ☒

Dates of Examination of principal parts—Cylinders 29.5.14. Slides 28.6.14. Covers 29.5.14. Pistons 4.7.14. Rods 25.6.14. Connecting rods 25.6.14. Crank shaft 4.6.14. Thrust shaft 18.6.14. Tunnel shafts 18.6.14. Screw shaft 15.6.14. Propeller 18.6.14. Stern tube 15.6.14. Steam pipes tested 11-10-17. Engine and boiler seatings 28-6-17. Engines holding down bolts 11-10-17. Completion of pumping arrangements 26-10-17. Boilers fixed 11-10-17. Engines tried under steam 26-10-17. Completion of fitting sea connections 28-6-17. Stern tube 28-6-17. Screw shaft and propeller 28-6-17. Main boiler safety valves adjusted 16-10-17. Thickness of adjusting washers $7\frac{3}{4}$ & $2\frac{1}{2}$. Material of Crank shaft Steel Identification Mark on Do. 694 J.H.M. Material of Thrust shaft Steel Identification Mark on Do. 694 J.H.M. Material of Tunnel shafts Thrust shaft Identification Marks on Do. 694 J.H.M. Material of Screw shafts W. Iron Identification Marks on Do. 694 J.H.M. Material of Steam Pipes solid drawn copper. Test pressure 400 lbs. Is an installation fitted for burning oil fuel ☒ Is the flash point of the oil to be used over 150°F. ☒

Have the requirements of Section 49 of the Rules been complied with ☒ Is this machinery duplicate of a previous case *Yes*. If so, state name of vessel "William Ram" (London Rpt. 8012).

General Remarks (State quality of workmanship, opinions as to class, &c. The engines for this vessel have been built under special survey, and in accordance with the terms of the specification. The materials and workmanship are sound & good.

The machinery will be eligible in my opinion to have record of L.M.C. (with date) when satisfactorily completed on board; and when the spare part has been checked, the pumping arrangements found in order, and the remaining terms of the specification complied with.

The Machinery of this vessel has been properly fitted & secured on board the vessel & on completion was tested under full power for two hours as required by the Admiralty & found satisfactory. The safety valves have been adjusted under steam & tested for accumulation which did not exceed 212 lbs. The spare part has been checked.

In our opinion the vessel is eligible for the record + L.M.C. 11-17

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 11.17.

The amount of Entry Fee ... £ : :
Approved Special ... £ 4 : 0 :
Donkey Boiler Fee ... £ 6 : 10 :
Travelling Expenses (if any) £ : 12/3 :

When applied for,
24.8.1914
5-11-17 Hull
When received, 20N.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

MAINTENANCE CERTIFICATE
HULL



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Lloyd's Register
Foundation