

REPORT ON MACHINERY.

No. 30165
OCT. 1917

Received at London Office

Date of writing Report 26-9-17 When handed in at Local Office 26-9-17 Port of Hull
 No. in Survey held at Hull Date, First Survey 1.9.16 Last Survey 26-9-17 19
 Reg. Book. 1616 on the steel screw trawler Cornelian (Number of Visits 33)
 Master Telly Built at Telly By whom built Cochran & Sons Ltd Tons { Gross 262
 Engines made at Hull By whom made Chas. & Holmes No 2 & 3 when made 1917-9
 Boilers made at Hull By whom made Chas. & Holmes No 2 & 3 when made 1917-9
 Registered Horse Power 76 Owners Kingston Trawling Co Ltd Port belonging to Hull
 Nom. Horse Power as per Section 28 76 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders Three No. of Cranks 3
 Dia. of Cylinders 13"-21½"-35" Length of Stroke 24" Revs. per minute 115 Dia. of Screw shaft 7.48" Material of Iron
 as per rule 7.48" as fitted 7.2" screw shaft)
 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 35½"
 Dia. of Tunnel shaft 6.74" as per rule 6.74" as fitted 6.74" Dia. of Crank shaft journals 7.08" as per rule 7.08" as fitted 7.2" Dia. of Crank pin 7.4" Size of Crank webs 14" x 4½" Dia. of thrust shaft under
 collars 7.4" Dia. of screw 9'-0" Pitch of Screw 10'-7½" No. of Blades 4 State whether moveable no Total surface 31½"
 No. of Feed pumps one Diameter of ditto 2½" Stroke 14½" Can one be overhauled while the other is at work yes
 No. of Bilge pumps one Diameter of ditto 2½" Stroke 14½" Can one be overhauled while the other is at work yes
 No. of Donkey Engines one 43" yectn Sizes of Pumps 6", 4½" x 6" duplex No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two 2½" dia In Holds, &c. one 2½" dia in each compartment
all suction pipes connected to ejector.
 No. of Bilge Injections one sizes 3½" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 3" yectn
 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 wooden casing
 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 corked from yes

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Thornycroft & Lloyds
 Total Heating Surface of Boilers 1250 Is Forced Draft fitted no No. and Description of Boilers one single ended
 Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 18-8-17 No. of Certificate 3228
 Can each boiler be worked separately yes Area of fire grate in each boiler 43 No. and Description of Safety Valves to
 each boiler two spring loaded Area of each valve 4.9" Pressure to which they are adjusted 205 Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 7" Blagden Mean dia. of boilers 150" Length 10'-3" Material of shell plates steel
 Thickness 1½" Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double
 long. seams J.R.D.B. Diameter of rivet holes in long. seams 1½" Pitch of rivets 7.5" Lap of plates or width of butt straps 17"
 Per centages of strength of longitudinal joint 86.16 Working pressure of shell by rules 200 Size of manhole in shell 16" x 12"
 plate 8.5-24 No. and Description of Furnaces in each boiler Three plain Material steel Outside diameter 36"
 Length of plain part 76.2 Thickness of plates 1.13 Description of longitudinal joint welded No. of strengthening rings yes
 Working pressure of furnace by the rules 232 Combustion chamber plates: Material steel Thickness: Sides 11/16" Back 11/16" Top 11/16" Bottom 11/16"
 Pitch of stays to ditto: Sides 9.4" x 8" Back 10" x 8" Top 10" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 220
 Material of stays steel Area at smallest part 1.76 Area supported by each stay 64 Working pressure by rules 220 End plates in steam space:
 Material steel Thickness 1.732 Pitch of stays 17 x 16.2 How are stays secured 9.7 x 16 Working pressure by rules 226 Material of stays steel
 Area at smallest part 6.48 Area supported by each stay 280.5 Working pressure by rules 240 Material of Front plates at bottom steel
 Thickness 1" Material of Lower back plate steel Thickness 1.916 Greatest pitch of stays 16 x 11 Working pressure of plate by rules 209
 Diameter of tubes 3½" Pitch of tubes 5 x 4.16 Material of tube plates steel Thickness: Front 1" Back 7/8" Mean pitch of stays 9.78"
 Pitch across wide water spaces 13.74 Working pressures by rules 203 Girders to Chamber tops: Material steel Depth and
 thickness of girder at centre 10" x 1.34 Length as per rule 33.78 Distance apart 10" Number and pitch of stays in each Three 8"
 Working pressure by rules 220 Steam dome: description of joint to shell yes % of strength of joint yes
 Diameter yes Thickness of shell plates yes Material yes Description of longitudinal joint yes Diam. of rivet holes yes
 Pitch of rivets yes Working pressure of shell by rules yes Crown plates yes Thickness yes How stayed yes

SUPERHEATER. Type yes Date of Approval of Plan yes Tested by Hydraulic Pressure to yes
 Date of Test yes Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler yes
 Diameter of Safety Valve yes Pressure to which each is adjusted yes Is Easing Gear fitted yes

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:— *Two top end bolts & nuts, two bottom end bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set of air, feed & bilge pump valves, one main & one donkey chest valve & seat, 12 piston studs & nuts, one impeller shaft for circulating pump, one set of donkey pump valves, one feed & bilge pump plunger, one safety valve spring, & a quantity of bolts & nuts & iron of various sizes.*

The foregoing is a correct description,

CHARLES D. HOLMES & CO. LTD.

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } *1916: Sep. 1, 15, 18, 21, 23, 26. Oct. 4. Nov. 9. 1917: Apr. 3. Jun. 14. Jul. 2, 6, 13, 18, 19, 21, 23, 24, 25, 27*
{ During erection on board vessel -- } *31. Aug. 12, 18, 13, 24, 30. Sep. 3, 11, 17, 20, 24, 26.*
Total No. of visits *33*

Is the approved plan of main boiler forwarded herewith *yes*

" " " *donkey* " " " *✓*

Dates of Examination of principal parts—Cylinders *2-7-17* Slides *31-7-17* Covers *27-7-17* Pistons *24-7-17* Rods *23-7-17*

Connecting rods *18-7-17* Crank shaft *13-7-17* Thrust shaft *3-4-17* Tunnel shafts *✓* Screw shaft *23-9-16* Propeller *23-9-16*

Stern tube *21-9-16* Steam pipes tested *11-9-17* Engine and boiler seatings *26-9-16* Engines holding down bolts *3-9-17*

Completion of pumping arrangements *24-9-17* Boilers fixed *3-9-17* Engines tried under steam *24-9-17*

Completion of fitting sea connections *26-9-16* Stern tube *26-9-16* Screw shaft and propeller *26-9-16*

Main boiler safety valves adjusted *20-9-17* Thickness of adjusting washers *7 3/8" & 7/16"*

Material of Crank shaft *Iron* Identification Mark on Do. *1793 FLS* Material of Thrust shaft *Iron* Identification Mark on Do. *257 DDW*

Material of Tunnel shafts *✓* Identification Marks on Do. Material of Screw shafts *Iron* Identification Marks on Do. *1731 FLS*

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 *Ruby etc.*

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 approved plans & the rules of this Society the materials & workmanship are good. The boiler & steam pipes have been tested as above by hydraulic pressure & found sound & tight. The machinery has been properly fitted & secured on board the vessel & on completion tried under full working condition & found satisfactory. The safety valves have been adjusted under steam & tested for accumulation which did not exceed 210 lbs.

In my opinion the vessel is eligible for the record & L.M.C. 9-17

It is submitted that
this vessel is eligible for
THE RECORD & L.M.C. 9.17.

The amount of Entry Fee ... £ *1* : *0* :
Special ... £ *11* : *2* :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : *8 1/2* :
When applied for, *27.9.19.17*
When received, *28.9.19.17*

Committee's Minute *TUE - 20 OCT. 1917*

Assigned *+ L.M.C. 9.17*

Frank L. Sturgis
Engineer Surveyor to Lloyd's Register of Shipping.

Rpt. 13.

RE

Port of

No. in on t

Reg. Book

1616

Owners *King*

Yard No. *675*

DESCRIPTION

Roby high

Holmes

Capacity of Dyna

Where is Dynam

Position of Main

Positions of aux

wheel house

If fuses are fitted

circuits *yes*

If vessel is wired

Are the fuses of

Are all fuses fitted

are permanent

Are all switches an

Total number of lig

A *1*

B *2*

C *11*

D *13*

E

3 Mast head

2 Side

3

If arc lights, what p

Where are the switc

DESCRIPTION OF

Main cable carrying

Branch cables carryin

Branch cables carryin

Leads to lamps carryin

Cargo light cables carry

DESCRIPTION OF I

Henley's

Joints in cables, how m

Are all the joints of cab

positions, none bei

Are there any joints in

How are the cables led

bulkheads



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