

# REPORT ON MACHINERY.

No. 30767

Received at London Office

Date of writing Report

18

When handed in at Local Office

29/10/18 Port of Hull

No. in Survey held at Hull

Date, First Survey 6.3.18

Last Survey 11.10.18 1918

Reg. Book.

on the steel Patrol Gunboat - Kildonan

(Number of Plates 58

Gross 525

Net 226

Master

Built at Telby

By whom built Cochrane & Sons Ltd

When built 1918-10

Engines made at Hull

By whom made Chas. & Holmes & Co Ltd

when made 1918-10

Boilers made at Hull

By whom made Chas. & Holmes & Co Ltd

when made 1918-10

Registered Horse Power

Owners British Admiralty

Port belonging to

Com. Horse Power as per Section 28 213

Is Refrigerating Machinery fitted for cargo purposes no

Is Electric Light fitted no

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders Three

No. of Cranks 3

No. of Cylinders 16-26-44 Length of Stroke 26" Revs. per minute

Dia. of Screw shaft

as per rule 8.5" Material of steel

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

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

Dia. of Tunnel shaft as per rule 7.95"

Dia. of Crank shaft journals as per rule 8.35"

as fitted 8.2"

Dia. of Crank pin 8.35"

Size of Crank webs 5 1/2 x 13 Dia. of thrust shaft under

rollers 8 1/2" Dia. of screw 9-6" Pitch of Screw 8-6"

No. of Blades 4

State whether moveable no

Total surface 36 sq ft

No. of Feed pumps 2 Wires Diameter of ditto 7" Stroke 18"

Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 6" Stroke 6"

Can one be overhauled while the other is at work

No. of Donkey Engines 2 & three 2" jets Sizes of Pumps 9.5 x 7.5 x 6" Bilge 6'6" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room three 2" dia. jets in each compartment, valves worked from deck

No. of Bilge Injections one size 6" dia Connected to condenser or to circulating pump yes

Is a separate Donkey Suction fitted in Engine room & size yes 2"

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 no

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 casings

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

BOILERS, &c.—(Letter for record S)

Manufacturers of Steel J. Spencer & Sons & Co Ltd

Total Heating Surface of Boilers 3664 sq ft

Is Forced Draft fitted yes

No. and Description of Boilers Two single ended

Working Pressure 200 lbs

Tested by hydraulic pressure to 400 lbs

Date of test 28.5.18

No. of Certificate A 3296

Can each boiler be worked separately yes

Area of fire grate in each boiler 51.5 sq ft

No. and Description of Safety Valves to

each boiler Two spring loaded

Area of each valve 5.94 sq in

Pressure to which they are adjusted 205

Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 9" bulge

Mean dia. of boilers 156"

Length 11-6" Material of shell plates steel

Thickness 1 1/4"

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. & B. 1

Diameter of rivet holes in long. seams 1 1/4"

Pitch of rivets 8 1/2"

Top of plates or width of butt straps 18 1/2"

Per centages of strength of longitudinal joint

plate 91.8%

Working pressure of shell by rules 201

Size of manhole in shell 16" x 12"

Size of compensating ring 7" x 1 1/4"

No. and Description of Furnaces in each boiler 3 Brighton

Material steel Outside diameter 41 1/2"

Length of plain part top bottom

V

Thickness of plates crown bottom

7.9 1/16"

Description of longitudinal joint welded

No. of strengthening rings yes

Working pressure of furnace by the rules 211

Combustion chamber plates: Material steel Thickness: Sides 1 1/16"

Back 1 1/16" Top 1 1/16" Bottom 1 1/16"

Pitch of stays to ditto: Sides 8 3/4" x 9"

Back 8 3/4" x 9"

Top 8 3/4" x 9" If stays are fitted with nuts or riveled heads nuts

Working pressure by rules 207

Material of stays steel

Area at smallest part 2.4 sq in

Area supported by each stay 96.25 sq in

Working pressure by rules 224

Material steel Thickness 1 3/32"

Pitch of stays 11" x 16"

How are stays secured 8.7 x 6"

Working pressure by rules 208

Area at smallest part 6.33 sq in

Area supported by each stay 272 sq in

Working pressure by rules 242

Material of Front plates at bottom steel

Thickness 1"

Material of Lower back plate steel

Thickness 1"

Greatest pitch of stays 14 1/2" x 8 3/4"

Working pressure of plate by rules 241

Diameter of tubes 2 1/2"

Pitch of tubes 3 3/4" x 3 1/4"

Material of tube plates steel Thickness: Front 1"

Back 1 3/16" Mean pitch of stays 8 3/4"

Pitch across wide water spaces 13 1/4"

Working pressures by rules 204

Girders to Chamber tops: Material steel

Depth and

thickness of girder at centre 8" x 1 3/4"

Length as per rule 31 1/4"

Distance apart 8 1/2"

Number and pitch of stays in each Two 9"

Working pressure by rules 202

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

UPERHEATER. 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

Material 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, 3 piston rings bolts & nuts, 10 condenser tubes & 40 perules, one pair each main bearing & top & bottom end bracket, one set of segments piston rod valve rod packing, two seats for main regulating valve, 6 cylinder & 6 valve chest studs, one set of escape valve springs, piston valve for reversing engine, 6 plain & 2 stay tubes, fire bars for 3 furnaces, one set of safety valve springs, one main & one donkey check valve, set of valves for fresh draught, one set of air feed, bilge & donkey pump valves, packing rings for air pump, pair main bearing, top & bottom end brackets for circulating pump also valve spindle & piston rings, packing rings for feed pumps, set of evaporator coils, pair of main bearing, top & bottom end brackets for fan engines also piston & valve rod, set of piston rings & eccentric strap rod & a quantity of bolts & nuts & iron of various sizes.

The foregoing is a correct description,

for **CHARLES D. HOLMES & CO. LTD.**

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1918: Mar 6, 8, 11, 13, 16, 22, 23, 25, 27, 28. Apr. 3, 4, 8, 10, 12, 16, 19, 22, 24, 25, 30  
During erection on board vessel -- May 3, 4, 6, 8, 10, 11, 13, 14, 16, 22, 24, 28, 29, 31. June 3, 6, 10, 13, 20, 25, 27. July 1, 9, 12  
Total No. of visits 58  
Is the approved plan of main boiler forwarded herewith *forwarded with J. J. Kildare*

Dates of Examination of principal parts—Cylinders 3-5-18 Slides 3-5-18 Covers 19-4-18 Pistons 3-5-18 Rods 6-5-18  
Connecting rods 10-5-18 Crank shaft 8-5-18 Thrust shaft 9-5-18 Tunnel shafts 25-3-18 Screw shaft 23-3-18 Propeller 23-3-18  
Stern tube 23-3-18 Steam pipes tested 13-20-18 Engine and boiler seatings 26-3-18 Engines holding down bolts 10-6-18  
Completion of pumping arrangements 26-9-18 Boilers fixed 28-8-18 Engines tried under steam 23-8-18 26-9-18  
Completion of fitting sea connections 26-3-18 Stern tube 26-3-18 Screw shaft and propeller 26-3-18  
Main boiler safety valves adjusted 25-9-18 Thickness of adjusting washers *For P 1/2 S 3/4 Aft. P 3/4 S 1/2*  
Material of Crank shaft *steel* Identification Mark on Do. *2119 FLS* Material of Thrust shaft *steel* Identification Mark on Do. *2120 FLS*  
Material of Tunnel shafts *steel* Identification Marks on Do. *2111 FLS* Material of Screw shafts *steel* Identification Marks on Do. *2110 FLS*  
Material of Steam Pipes *solid drawn steel* Test pressure *600 lbs.*

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 Section 49 of the Rules been complied with ☒

Is this machinery duplicate of a previous case *yes* If so, state name of vessel *Kildalkey, Kildare.*

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, specification & the rules of this Society the materials & workmanship are good, the various parts have been tested as required by the specification of good sound & good. The machinery has been properly fitted & secured on board the vessel & on completion tested under full power as required by the Admiralty for two hours & found satisfactory. The safety valves have been adjusted under steam & tested for accumulation which did not exceed 2 1/2 lbs. In my opinion the vessel is eligible for the record + L.M.C. 10-18*

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 10.18 F.D.

*1-11-18* *9/11/18*

The amount of Entry Fee ... £ 4 : 0 :  
Special ... £ 61 : 6 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : :  
When applied for, 4/11/18  
When received, 7/12/18

*Frank J. Lingen*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

FRI. 1-NOV. 1918

FRI. MAY. 14 1920



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