

REPORT ON MACHINERY

No. 30782
8 NOV 1918

Received at London Office

Date of writing Report 4-11-18 19 When handed in at Local Office 6-11-19 19 Port of Hull

To. in Survey held at Reg. Book. 578 on the steel screw steamer "War Pintail" Date, First Survey 19. 12-17 Last Survey 4-11-18 1918 (Number of Visits 73) Gross 4449 Tons Net 2681 When built 1912-11

Master Built at Hull By whom built Earle & Co. Ltd. Engines made at Hull By whom made Earle & Co. Ltd. when made 1912-11 Boilers made at Hull By whom made Earle & Co. Ltd. when made 1912-11 Registered Horse Power Owners Headland & Rowland (Hull) Port belonging to London

Tom. Horse Power as per Section 28 517 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 27"-44"-73" Length of Stroke 48" Revs. per minute Dia. of Screw shaft as per rule 14.7" Material of screw shaft steel as fitted 15.2" 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 water tight

Is the propeller boss yes If the liner is in more than one length are the joints burned 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 If two liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 60 1/2"

Dia. of Tunnel shaft as per rule 13.33" Dia. of Crank shaft journals as per rule 13.99" Dia. of Crank pin 14 1/2" Size of Crank webs 9"x22" Dia. of thrust shaft under collars 14 1/2" Dia. of screw 17-6" Pitch of Screw 18-6" No. of Blades 4 State whether moveable no Total surface 100 sq ft

No. of Feed pumps two Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work yes

No. of Bilge pumps two Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work yes

No. of Donkey Engines Three single Sizes of Pumps 2 1/2" x 18" Ballon 10 1/2" x 24" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room Four 3 1/2" dia. General service 9 1/2" x 18" In Holds, &c. Two 3 1/2" dia. in Nos. 1, 2, 3, & 4. one 3 1/2" dia. in No. 5. one 3 1/2" dia. in fore & after peaks.

No. of Bilge Injections one sizes 13" Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes 3 1/2"

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 below

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 under ceiling

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 no worked from entered from trunk at each end

BOILERS, &c.—(Letter for record S) Manufacturers of Steel J. Spencer & Sons

Total Heating Surface of Boilers 7668 sq ft Is Forced Draft fitted yes No. and Description of Boilers Three single ended

Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs. Date of test 11-9-18 No. of Certificate 53317 P 23-9-18 3319 P 3321

Can each boiler be worked separately yes Area of fire grate in each boiler 63.3 sq ft No. and Description of Safety Valves to each boiler two spring loaded Area of each valve 9.6 sq in Pressure to which they are adjusted 185 lbs. Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 18" air casing Mean dia. of boilers 186" 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.D.B. Diameter of rivet holes in long. seams 1 7/16" Pitch of rivets 9 1/2" Lap of plates or width of butt straps 19 1/2"

Per centages of strength of longitudinal joint rivets 88.2 plate 85.6 Working pressure of shell by rules 182 Size of manhole in shell in end 16"x12"

Size of compensating ring No. and Description of Furnaces in each boiler 3. Brighton Material steel Outside diameter 50.1/8"

Length of plain part top 19" Thickness of plates bottom 1 1/2" Description of longitudinal joint welded No. of strengthening rings 1

Working pressure of furnace by the rules 188 Combustion chamber plates: Material steel Thickness: Sides 23/32 Back 1 1/4" Top 23/32 Bottom 23/32

Pitch of stays to ditto: Sides 10 5/8" x 9 1/4" Back 10 1/4" x 9 1/4" Top 10 5/8" x 9 1/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180

Material of stays steel Area at smallest part 2 1/4" Area supported by each stay 98 1/2" Working pressure by rules 219 End plates in steam space: Material steel Thickness 1 1/2" Pitch of stays 2 1/4" x 20 1/2" How are stays secured 8. 7. x 6 Working pressure by rules 191 Material of stays steel

Area at smallest part 8.29" Area supported by each stay 446" Working pressure by rules 193 Material of Front plates at bottom steel

Thickness 3/32" Material of Lower back plate steel Thickness 27/32 Greatest pitch of stays 13 5/8" x 8 3/4" Working pressure of plate by rules 187

Diameter of tubes 2 3/4" Pitch of tubes 4" x 3 3/8" Material of tube plates steel Thickness: Front 3 1/32 Back 3/4" Mean pitch of stays 10"

Pitch across wide water spaces 13 5/8" Working pressures by rules 181 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 10" x 1 3/4" Length as per rule 35.56 Distance apart 10 5/8" Number and pitch of stays in each Three 9 1/4"

Working pressure by rules 187 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

No. of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

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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 3 crank shaft coupling bolts & nuts, 3 tunnel shafting bolts & nuts, one feed & bilge suction valve one feed & one bilge discharge valve, 3 main & 3 donkey check valves 6 cylinder & 6 steam chest studs & nuts, 12 junk ring studs & nuts, one propeller 6 air pump valves, packing for piston rods & valve rods, a quantity of bolts & nuts & iron of various size & remains spare for as per specification*

FOR EARLE'S

The foregoing is a correct description, *WARRICK*

G. W. Stallard

Manufacturer.

Dates of Survey while building { During progress of work in shops -- *1917: Dec 19th to Nov 4th 1918*
During erection on board vessel --
Total No. of visits *73*

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

" " " donkey " " "

Dates of Examination of principal parts—Cylinders *4-6-18* Slides *27-6-18* Covers *9-7-18* Pistons *12-8-18* Rods *4-6-18*
Connecting rods *12-8-18* Crank shaft *12-8-18* Thrust shaft *27-8-18* Tunnel shafts *11-10-18* Screw shaft *12-9-18* Propeller *12-9-18*
Stern tube *12-9-18* Steam pipes tested *22-10-18* Engine and boiler seatings *23-9-18* Engines holding down bolts *28-10-18*
Completion of pumping arrangements *31-10-18* Boilers fixed *22-10-18* Engines tried under steam *31-10-18*
Completion of fitting sea connections *23-9-18* Stern tube *14-9-18* Screw shaft and propeller *28-9-18*
Main boiler safety valves adjusted *25-10-18* Thickness of adjusting washers *Port P 1/16 S 1/16 G P 1/8 S 7/16 G P 1/32 S 13/32*
Material of Crank shaft *steel* Identification Mark on Do *2615D K.P.* Material of Thrust shaft *steel* Identification Mark on Do *2615D M.R.*
Material of Tunnel shafts *steel* Identification Marks on Do *2615D M.R.* Material of Screw shafts *steel* Identification Marks on Do *4653 G.A.H.*
Material of Steam Pipes *lap welded steel* Test pressure *540 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 *no* If so, state name of vessel *Standard B. Type*

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 specification & the rules of this Society, the materials & workmanship are good the boiler and steam pipes have been tested as above & found sound & good, the machinery has been properly fitted & secured on board the vessel on completion tested under steam at the morning at about 40 revs for two hours & found to work satisfactorily the safety valves have been adjusted under steam & tested for accumulation which did not exceed 150 lbs. In my opinion the vessel is eligible for the record + L.M.C. 11.18.*

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 11.18 F.D.

11-11-18

W.R.S.L.

The amount of Entry Fee ... £ : : When applied for, *6/11/18*
Special ... £ *98-17-4*
Donkey Boiler Fee ... £ : : When received, *28-12-19*
Travelling Expenses (if any) £ : : *3/12/18*

Committee's Minute

Assigned

+ L.M.C. 11.18

TUE NOV 12 1918

MACHINERY CERTIFICATE
WRITTEN



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