

REPORT ON MACHINERY

No. 30782
8 NOV 1918

Received at London Office

Date of writing Report 4-11-18 When handed in at Local Office 6-11-19 Port of Hull
 No. in Survey held at 19-12-17 Date, First Survey 19-12-17 Last Survey 4-11-18 19 18
 Reg. Book. 578 on the steel screw steamer "War Pintail" (Number of Volls 73)
 Master Hull Built at Hull By whom built Earle & Co. Ltd Tons } Gross 4449
 } Net 2681
 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 517 Owners Headland & Rowland (Incs) Port belonging to London
 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 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 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 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" x 22" 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 Two 9 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 Toward 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
14-9-18 3319
P 23-9-18 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 1/2" 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.1 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 88.2 Working pressure of shell by rules 182 Size of manhole in shell in end 16 x 12
 plate 85.6 No. and Description of Furnaces in each boiler 3. Brighton Material steel Outside diameter 50.1875
 Length of plain part top 19 1/2" Thickness of plates bottom 3 1/32" 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 1/16" Top 23/32" Bottom 23/32"
 Pitch of stays to ditto: Sides 10 5/8" x 9 1/4" Back 10 1/4" x 8 3/4" 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 sq in Area supported by each stay 98 1/2 sq in Working pressure by rules 219 End plates in steam space:
 Material steel Thickness 1 1/2" Pitch of stays 21 3/4" x 20 1/2" How are stays secured D. T. & W. Working pressure by rules 191 Material of stays steel
 Area at smallest part 8.29 sq in Area supported by each stay 446 sq in 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 7/8" Material of tube plates steel Thickness: Front 3/32" Back 3/4" Mean pitch of stays 10"
 Pitch across wide water spaces 13 7/8" 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 1/2"
 Working pressure by rules 187 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
 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 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 & remainings spare for as per specification

FOR EARLE'S
SUPPLYING & ENGINEERING CO. LIMITED.

The foregoing is a correct description,

G. W. Stallord

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*

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 23-9-18
Main boiler safety valves adjusted 25-10-18 Thickness of adjusting washers Port P¹/₂ S¹/₂ 6 P¹/₂ S¹/₂ 6 P¹/₂ S¹/₂ 6
Material of Crank shaft *steel* Identification Mark on Do. 2615D R.P. Material of Thrust shaft *steel* Identification Mark on Do. 2615D MR
Material of Tunnel shafts *steel* Identification Marks on Do. 2615D MR 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 & measured on board the vessel on completion tested under steam at the mooring at about 40 rps 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.

J. H. 11-11-18
J. H. 11-11-18

The amount of Entry Fee ... £ : :
Special ... £ 98 - 17-4
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 6/11/1916
When received, 28/12/1918

Frank A. Sturgeon
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

+ L.M.C. 11.18

TUE NOV 12 1918

MACHINERY CERTIFICATE
WRITTEN



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Foundation

The Surveys are requested not to be on or below the space for Committee's Minute.