

REPORT ON MACHINERY.

No. 73326

Received at London Office JUL 21 1920

Date of writing Report 19 When handed in at Local Office 19. 7. 19 20 Port of Newcastle

No. in Survey held at Leith Shields Date, First Survey 1st Sept 1919 Last Survey 11th June 1920
Reg. Book. on the SS. "Wynstone" Engine no 606 (Number of Visits 2)

Master Built at Lowestoft By whom built John Chambers Ltd When built 1920

Engines made at Leith Shields By whom made G. J. Gray & Co Ltd when made 1920

Boilers made at Sunderland By whom made G. J. Gray & Co Ltd when made 1920

Registered Horse Power 600 Owners Messrs Stone & Relf Port belonging to Llanelli

Nom. Horse Power as per Section 28 108 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 15" x 35" x 14" Length of Stroke 24" Revs. per minute 100 Dia. of Screw shaft 5.5" Material of screw shaft Steel

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 36 3/4"

Dia. of Tunnel shaft 8" Dia. of Crank shaft journals 8" Dia. of Crank pin 8" Size of Crank webs 1 1/2" x 5 1/4" Dia. of thrust shaft under collars 8"

Dia. of screw 9 1/4" Pitch of Screw 11-3" No. of Blades 4 State whether moveable No Total surface 43 1/2

No. of Feed pumps 2 Diameter of ditto 2 1/2" Stroke 14" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 2 1/2" Stroke 11" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 Sizes of Pumps 2" x 4" & 1" x 4" No. and size of Suctions connected to both Bilge and Donkey pumps 6" x 2"

Engine Room Three 2" x 4" & 1 donkey pump see 2 1/2" In Holds, &c. Six 2"

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

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

How are pipes carried through the bunkers Hold bulk Suction How are they protected wood 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 worked from Yes

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

Total Heating Surface of Boilers 1844 Is Forced Draft fitted No No. and Description of Boilers One Single Ended

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 14-5-20 No. of Certificate 3685

Can each boiler be worked separately Yes Area of fire grate in each boiler 50 No. and Description of Safety Valves to boiler 2 Spring Loaded

Area of each valve 5.9 Pressure to which they are adjusted 185 Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 18 ins Mean dia. of boilers 14 Length 14 Material of shell plates Steel

Thickness 1/2" Range of tensile strength 40,000 Are the shell plates welded or flanged Yes Descrip. of riveting: cir. seams Yes

Seams Yes Diameter of rivet holes in long. seams 1/4" Pitch of rivets 2" Lap of plates or width of butt straps 1"

Percentages of strength of longitudinal joint 85 Working pressure of shell by rules 180 Size of manhole in shell 18"

No. of compensating ring 1 No. and Description of Furnaces in each boiler 1 Material Steel Outside diameter 14"

Length of plain part 14" Thickness of plates 1/2" Description of longitudinal joint Butt No. of strengthening rings 1

Working pressure of furnace by the rules 180 Combustion chamber plates: Material Steel Thickness: Sides 1/2" Back 1/2" Top 1/2" Bottom 1/2"

No. of stays to ditto: Sides 1 Back 1 Top 1 If stays are fitted with nuts or riveted heads Yes Working pressure by rules 180

Material of stays Steel Area at smallest part 14" Area supported by each stay 14" Working pressure by rules 180 End plates in steam space: Yes

Material Steel Thickness 1/2" Pitch of stays 2" How are stays secured By nuts Working pressure by rules 180 Material of stays Steel

Area at smallest part 14" Area supported by each stay 14" Working pressure by rules 180 Material of Front plates at bottom Steel

Thickness 1/2" Material of Lower back plate Steel Thickness 1/2" Greatest pitch of stays 2" Working pressure of plate by rules 180

Number of tubes 14 Pitch of tubes 2" Material of tube plates Steel Thickness: Front 1/2" Back 1/2" Mean pitch of stays 2"

Working pressures by rules 180 Girders to Chamber tops: Material Steel Depth and 14"

Thickness of girder at centre 1/2" Length as per rule 14" Distance apart 14" Number and pitch of stays in each 1 2"

Working pressure by rules 180 Steam dome: description of joint to shell Butt % of strength of joint 85

Material Steel Thickness of shell plate 1/2" Material Steel Description of longitudinal joint Butt Diam. of rivet holes 1/4"

No. of rivets 14 Working pressure of shell by rules 180 Crown plates Yes Thickness 1/2" How stayed By nuts

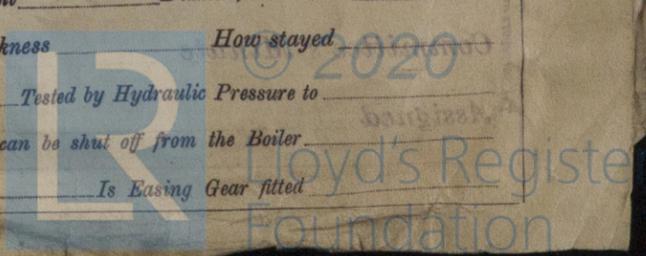
Superheater. Type Water Tube Date of Approval of Plan 14-5-20 Tested by Hydraulic Pressure to 360 lbs

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes

Pressure to which each is adjusted 180 lbs Is Easing Gear fitted Yes

See Sunderland and Report

W491-0165



REPORT ON MACHINERY

IS A DONKEY BOILER FITTED? Yes If so, is a report now forwarded? Yes

SPARE GEAR. State the articles supplied:—
 2 connecting rod top end bolts + nuts. 2 bottom end bolts + nuts. 2 main bearing bolts + nuts. 1 set of coupling bolts + nuts. 1 set piston bolts + nuts. 1 set feed pump valves. 1 set of large pump valves. 1 set of air + circulating pump valves. 1 propeller ready for fitting.

The foregoing is a correct description,
 For Geo. J. Grey & Co.
 11 Market Street, London E.C. 4
 Manufacturers of Engines

Dates of Survey while building
 During progress of work in shops: 1919 Sep. 18, Oct. 27, 29, Dec. 30, 1920 Jan. 21, 26, Feb. 21, Mar. 11, 22, Apr. 15, 22, 26, May 4, 19, 26, 31, Jun. 2, 11
 During erection on board vessel: 1920 July 14, Aug. 10, Sep. 10, 24, Oct. 1, 6, 19, 20, Nov. 4, 9, 15, 18
 Total No. of visits: 20, 33

Is the approved plan of main boiler forwarded herewith Yes
 " " " donkey " " " Yes
 Dates of Examination of principal parts—Cylinders 24-5-20 Slides 21-5-20 Covers 31-5-20 Pistons 31-5-20 Rods 14-5-20
 Connecting rods 17-5-20 Crank shaft 14-5-20 Thrust shaft 2-6-20 Tunnel shafts None Screw shaft 2-6-20 Propeller 11-6-20
 Stern tube 17-5-20 Steam pipes tested 24-9-20 Engine and boiler seatings 14-6-20 Engines holding down bolts 10-8-20
 Completion of pumping arrangements 20-10-20 Boilers fixed M.B. 24-9-20 D.B. 15-11-20 Engines tried under steam 20-10-20
 Completion of fitting sea connections 27-4-20 Stern tube 27-4-20 Screw shaft and propeller 27-5-20
 Main boiler safety valves adjusted 20-10-20 D.B. 15-11-20 Thickness of adjusting washers M.B. P $\frac{5}{16}$ " S $\frac{3}{64}$ " D.B. F $\frac{3}{64}$ " A $\frac{1}{2}$ "
 Material of Crank shaft Steel Identification Mark on Do. 1639 WGH Material of Thrust shaft Steel Identification Mark on Do. 2022 H
 Material of Tunnel shafts ✓ Identification Marks on Do. Material of Screw shafts Steel Identification Marks on Do. 2021 H
 Material of Steam Pipes Copper Test pressure 360 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 ✓

General Remarks (State quality of workmanship, opinions as to class, &c.) The engines of this vessel have been constructed under special survey, and the materials and workmanship are sound and good. On completion the engines were forwarded to Messrs Chambers, Shipbuilders, Lowestoft, for installing on their vessel. The Engines together with the Main & donkey boilers, have been examined, whilst being installed in the vessel, afterwards tried under working conditions, found satisfactory, and safety valves of main & donkey boilers adjusted under steam, when boilers were also examined.

The machinery of this vessel is now in good working condition and eligible in my opinion to have the Record L.M.C 11-20 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 11. 20

RCM 13/12/20
 J. McInellan & Robert R.
 Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 2 : 0 : 0 When applied for.
 Special Inv. account ... £ 5 : 0 : 0
 Donkey Boiler Fee ... £ 5 : 0 : 0
 Travelling Expenses (if any) £ 4 : 10 : 0

Committee's Minute FRI. 17 DEC. 1920
 Assigned + L.M.C. 11.20

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

