

pt. 4.

REPORT ON MACHINERY

No. 42617

THU. APR. 5 1923

Received at London Office

Date of writing Report 30.3.1923 When handed in at Local Office

Port of Glasgow

Survey held at Glasgow

Date, First Survey 12.2.1920 Last Survey 30.3.1923

on the

Tons { Gross
Net

Master Built at Middlesbrough By whom built Furness S. B. C. & N. Co. When built

Engines made at Glasgow By whom made Ross & Duncan N° 1090 when made 1922.3

Boilers made at do By whom made do N° 1621-2 when made 1923.3

Registered Horse Power Owners Port belonging to

nom. Horse Power as per Section 28 156 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

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

No. of Cylinders 17" 27 1/2" 46" Length of Stroke 33" Revs. per minute Dia. of Screw shaft 9.82" as per rule 9.82" Material of screw shaft 8. as fitted 10 3/16" screw shaft

The screw shaft fitted with a continuous liner the whole length of the stern tube Is the after end of the liner made water tight

the propeller boss 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

are fitted, is the shaft lapped or protected between the liners Length of stern bush 40 1/2"

No. of Tunnel shaft as per rule 8.62" Dia. of Crank shaft journals as per rule 9.05" Dia. of Crank pin 9 1/2" Size of Crank webs 17 1/2" x 6" Dia. of thrust shaft under

bars 9 1/2" Dia. of screw 12'-3" Pitch of Screw 12'-6" No. of Blades 4 State whether moceable Total surface 50 sq

No. of Feed pumps 2 Diameter of ditto 2 3/4" Stroke 16 1/2" Can one be overhauled while the other is at work

No. of Bilge pumps 2 Diameter of ditto 3" Stroke 16 1/2" Can one be overhauled while the other is at work

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

Engine Room In Holds, &c.

No. of Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size

Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks

Are they sized sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Discharge Pipes above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate

How are they protected

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

MANIFIESTERS, &c.—(Letter for record S.) Manufacturers of Steel Odwell

Total Heating Surface of Boilers 2806 sq ft Is Forced Draft fitted No. and Description of Boilers Two, multitubular

Working Pressure 180 lb Tested by hydraulic pressure to 320 lb Date of test 2.3.23 No. of Certificate 16198

Can each boiler be worked separately Yes Area of fire grate in each boiler 39.5 sq ft No. and Description of Safety Valves to

each boiler pair Spring Area of each valve 4.9 sq ft Pressure to which they are adjusted 185 lb Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork 1'-9" Mean dia. of boilers 12'-0" Length 10'-6" Material of shell plates S.

Thickness 1" Range of tensile strength 28-52 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R.

g. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 7" Top of plates on width of butt straps 1'-5 3/4"

Percentages of strength of longitudinal joint rivets 84.5 Working pressure of shell by rules 180 Size of manhole in shell 16" x 12"

Size of compensating ring 30 1/2" x 26 1/2" No. and Description of Furnaces in each boiler 2. Iron Material S Outside diameter 3'-7 1/8"

Length of plain part top bottom Thickness of plates crown 9/16" Description of longitudinal joint weld No. of strengthening rings

Working pressure of furnace by the rules 204 Combustion chamber plates: Material S. Thickness: Sides 1/16" Back 3/8" Top 1/16" Bottom 1/16"

Pitch of stays to ditto: Sides 9 1/2" x 9" Back 8 1/2" x 8" Top 9 1/2" x 9" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 187

Material of stays S. Area at smallest part 2.07 sq ft Area supported by each stay 85.5 sq ft Working pressure by rules 195 End plates in steam space:

Material S. Thickness 1 1/2" Pitch of stays 17" x 16" How are stays secured D. nuts Working pressure by rules 185 Material of stays S.

Area at smallest part 5.18 sq ft Area supported by each stay 272 sq ft Working pressure by rules 198 Material of Front plates at bottom S.

Thickness 2 3/32" Material of Lower back plate S. Thickness 2 3/32" Greatest pitch of stays 14" x 8 1/2" Working pressure of plate by rules 183

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

Clearance across wide water spaces 14" Working pressures by rules 242. Girders to Chamber tops: Material S. Depth and

Thickness of girder at centre 7 3/4" x 1 3/4" Length as per rule 30 5/8" Distance apart 9" Number and pitch of stays in each 2-9 1/2"

Working pressure by rules 194 Steam dome: description of joint to shell None % of strength of joint

Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

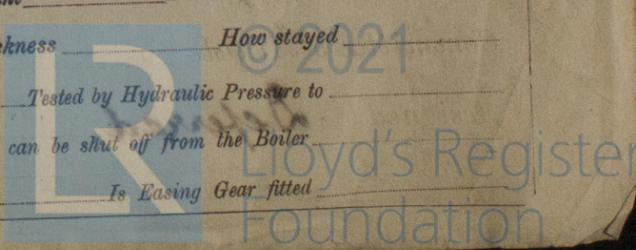
Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. Type Water 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

Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

W646-0200



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Ross & Duncan

Manufacturer.

Dates of Survey while building	During progress of work in shops - -	1920 Feb 12-23 Mar 9 Apr 14-20 May 3-13 19-24 31 Jun 4-14 19-21 Jul 7-13 Sept 17-21 25-29 Oct 4-11 13-19 29 Nov 3-8 15-23	
		During erection on board vessel - - -	30 Dec 13-27 1921 Jan 12-21 26 Feb 5-8 14-22 Mar 5-9 15-18 23-29 Apr 5-28 May 10-11 18 Aug 11 Sep 13 23-29 6-11 19 Nov 20
			Total No. of visits

Is the approved plan of main boiler forwarded herewith no

Is the approved plan of donkey boiler forwarded herewith no

Dates of Examination of principal parts—Cylinders 21-1-21 Slides 2-2-21 Covers 5-11-20 Pistons 8-11-20 Rods 24-1-23
 Connecting rods 25-11-20 Crank shaft 21-1-21 Thrust shaft 2-2-21 Tunnel shafts 24-1-21 Screw shaft 26-3-23 Propeller 24-1-23
 Stern tube 30-3-23 Steam pipes tested _____ Engine and boiler seatings _____ Engines holding down bolts _____
 Completion of pumping arrangements _____ Boilers fixed _____ Engines tried under steam _____
 Completion of fitting sea connections _____ Stern tube _____ Screw shaft and propeller _____
 Main boiler safety valves adjusted _____ Thickness of adjusting washers _____
 Material of Crank shaft S Identification Mark on Do. J.E.S. Material of Thrust shaft S Identification Mark on Do. J.E.S.
 Material of Tunnel shafts S Identification Marks on Do. J.S.C. Material of Screw shafts S Identification Marks on Do. J.S.C.
 Material of Steam Pipes _____ Test pressure _____

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 _____ If so, state name of vessel _____

General Remarks (State quality of workmanship, opinions as to class, &c. These Engines and Boilers have been built under Special Survey, in accordance with the Rules and approved plans, the materials & workmanship are good.)

The engines and boilers are being shipped to Middlesbrough where they will be fitted on board.

The machinery will be eligible in my opinion to be classed L.S.C. (with date) when satisfactorily fitted on board & tried under steam.

The amount of Entry Fee ... £ 3 : 0 : 0 When applied for, 4-4-23
 Special 4/5 ... £ 31 : 4 : 0
 Donkey Boiler Fee ... £ : : When received, 4-4-23
 Travelling Expenses (if any) £ : : 4-4-23

Jas Cairns

Engineer Surveyor to Lloyd's Register of Shipping.

WED 27 MAY 1923

Committee's Minute

GLASGOW

4 APR 1923

Assigned Deferred.



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