

# REPORT ON MACHINERY.

7. E. 11641

No. 42795

Received at London Office

WED JUN 13 1923

Date of writing Report 8<sup>th</sup> June 1923 When handed in at Local Office 9. 6. 1923

Port of Glasgow

Date, First Survey 4<sup>th</sup> June 1920 Last Survey 7<sup>th</sup> June 1923

(Number of Visits 46)

Tons } Gross  
Net

Built at Middlesbrough By whom built Furness S. B. C. N. 61

When built

Glasgow

By whom made Ross & Duncan

N. 1113 when made 1923

do

By whom made do

N. 1685-6 when made 1923

Registered Horse Power

Owners

Port belonging to

m. Horse Power as per Section 28 156

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

GINES, &c.—Description of Engines Triple expansion

No. of Cylinders 3

No. of Cranks 3

1. of Cylinders 17"-27 1/2"-45" Length of Stroke 33" Revs. per minute

Dia. of Screw shaft 9.85 as per rule 9.25 Material of screw shaft 8.

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

If two

Length of stern bush 40 1/2"

are fitted, is the shaft lapped or protected between the liners

2. 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

as fitted 8 3/4" Dia. of screw 12'-3" Pitch of Screw 12'-6" No. of Blades 4 State whether moveable

of Feed pumps 2 Diameter of ditto 2 1/4" Stroke 16 1/2" Can one be overhauled while the other is at work

of Bilge pumps 2 Diameter of ditto 3" Stroke 16 1/2" Can one be overhauled while the other is at work

of Donkey Engines Sizes of Pumps

No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room

In Holds, &c.

of Bilge Injections sizes Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine room & size

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

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

they fixed 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

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

at pipes are carried through the bunkers

How are they protected

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

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

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

which LERS, &c.—(Letter for record 8.) Manufacturers of Steel Colvill

al Heating Surface of Boilers 2806 Is Forced Draft fitted 40 No. and Description of Boilers Two single ended

Working Pressure 180 Tested by hydraulic pressure to 320 Date of test 7-6-23 No. of Certificate 16273-16274

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

boiler 1 Area of each valve 4.9" Pressure to which they are adjusted Are they fitted with easing gear

least distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers 12'-0" Length 10'-6" Material of shell plates 8.

thickness 1 Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams 2. 12.

seams T.R.I.B.S. Diameter of rivet holes in long. seams 1" Pitch of rivets 7" Lap of plates or width of butt straps 14 7/8"

centages of strength of longitudinal joint rivets 86.4 Working pressure of shell by rules 182 Size of manhole in shell 16" x 12"

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

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

Working pressure of furnace by the rules 189 Combustion chamber plates: Material 8 Thickness: Sides 1/16" Back 5/8" Top 1/16" Bottom 1/16"

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

erial of stays 8 Area at smallest part 2.07 Area supported by each stay 85.5" Working pressure by rules 195 End plates in steam space:

erial 8 Thickness 1" Pitch of stays 16" x 17" How are stays secured J.N.L.W. Working pressure by rules 197 Material of stays 8.

a at smallest part 4.57" Area supported by each stay 272" Working pressure by rules 182 Material of Front plates at bottom 8.

thickness 7/8" Material of Lower back plate 8. Thickness 2 7/32" Greatest pitch of stays 14" x 8 1/2" Working pressure of plate by rules 216

meter of tubes 3 1/2" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates 8 Thickness: Front 7/8" Back 3/4" Mean pitch of stays 10"

h across wide water spaces 14" Working pressures by rules 183 Girders to Chamber tops: Material 8. Depth and

ness of girder at centre 7" 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 214 Steam dome: description of joint to shell % of strength of joint

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

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

ERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

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

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

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W415-0089



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 Jun 4-14 Jul 7 Sep 3-9 Oct 1-9 Nov 8-25-30 Dec 27 1921 Jan 21-26 Feb 3-8-14-22 Mar 9-18-23 Apr 5-13-20-28  
During erection on board vessel - May 10-18 Aug 11 Sep 13-23 Nov 10-21-1923 Mar 14-23-26 Apr 5-9-16-26-30 May 7-11-15-18-22-28-31 Jun 5-7  
Total No. of visits 46

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 5-6-23 Slides 5-6-23 Covers 5-6-23 Pistons 18-5-23 Rods 18-5-23  
Connecting rods 18-5-23 Crank shaft 18-5-23 Thrust shaft 26-5-23 Tunnel shafts 26-5-23 Screw shaft 5-6-23 Propeller 5-6-23

Stern tube 5-6-23. 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. 1113 J.S.C. Material of Thrust shaft S Identification Mark on Do. 1113 H.C.

Material of Tunnel shafts S. Identification Marks on Do. 1113 H.C. Material of Screw shafts S Identification Marks on Do. 1113 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.

Three Engines and boilers have been built under Special Survey in accordance with the Rules and approved plans, the materials and workmanship are good.

The Engines and boilers are being shipped to Liddisburgh where they will be fitted on board.

The machinery is eligible in my opinion to be classed + L.M.C. (with date) when satisfactorily fitted on board and tried under steam.

The amount of Entry Fee ... £ 3 : 0 : 0 When applied for.  
Special 4/3 ... £ 31 : 4 : 0 11.6.23  
Donkey Boiler Fee ... £ : : : When received. 13.6.23  
Travelling Expenses (if any) £ : : : 19.23

Committee's Minute

GLASGOW 12 JUN 1923

Assigned

Deferred

Jas. Cairns

Engineer Surveyor to Lloyd's Register of Shipping.

TUE JUL 17 1923

FRI JUL 27 1923

See Indb 1164

FRI. OCT. 19 1923

FRI. 14 SEP. 1923

FRI. AUG. 31 1923

TUE. AUG. 21 1923

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