

REPORT ON MACHINERY.

No. 26752

Port of Glasgow

Received at London Office 10

No. in Survey held at Govan Date, first Survey 21st Nov^r 1907 Last Survey 5th March 1908
Reg. Book. on the S.S. Fosca (Number of Visits 10)

Master Built at By whom built Tons { Gross Not } When built

Engines made at Troon By whom made Ailsa S. B. & Engineering Co^s (No. 11) when made 1908

Boilers made at Govan By whom made Lindsay Burnett & Co^s (No. 1166) when made 1908

Registered Horse Power Owners Port belonging to

Nom. Horse Power as per Section 28 90 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

ENGINES, &c.—Description of Engines See separate report No. of Cylinders No. of Cranks

Dia. of Cylinders Length of Stroke Revs. per minute Dia. of Screw shaft as per rule as fitted Material of screw shaft

Is 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

in 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

liners are fitted, is the shaft lapped or protected between the liners Length of stern bush

Dia. of Tunnel shaft as per rule as fitted Dia. of Crank shaft journals as per rule as fitted Dia. of Crank pin Size of Crank webs Dia. of thrust shaft under

collars Dia. of screw Pitch of Screw No. of Blades State whether moveable Total surface

No. of Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work

No. of Bilge pumps Diameter of ditto Stroke Can one be overhauled while the other is at work

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

In 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 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

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

What pipes are carried through the bunkers 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

Dates of examination of completion of fitting of Sea Connections of Stern Tube Screw shaft and Propeller

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

BOILERS, &c.—(Letter for record 15) Manufacturers of Steel Plates by Stewart & Lloyd, Barrow-in-Warwickshire S Co

Total Heating Surface of Boilers 16344 Is Forced Draft fitted No No. and Description of Boilers One Single Ended

Working Pressure 130 lbs Tested by hydraulic pressure to 260 lbs Date of test 5.3.08 No. of Certificate 9247

Can each boiler be worked separately Area of fire grate in each boiler 53.0 No. and Description of Safety Valves to

each boiler two Spring loaded Area of each valve 4.06 Pressure to which they are adjusted 130 lbs Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers 13.6 Length 10.0 Material of shell plates Steel

Thickness 7/8 Range of tensile strength 28/32 lbs Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Double R.

long. seams D.R. butt Diameter of rivet holes in long. seams 1 1/8 Pitch of rivets 6 Lap of plates width of butt straps 11 3/4

Per centages of strength of longitudinal joint rivets 84.5% plate 81.25% Working pressure of shell by rules 132 lbs Size of manhole in shell 16 x 12

Size of compensating ring embossed No. and Description of Furnaces in each boiler 3 plain Material Steel Outside diameter 3.4

Length of plain part top 3.2 bottom 3.2 Thickness of plates crown 3/8 bottom 3/8 Description of longitudinal joint welded No. of strengthening rings None

Working pressure of furnace by the rules 144 lbs Combustion chamber plates: Material Steel Thickness: Sides 9/16 Back 9/16 Top 19/32 Bottom 9/16

Pitch of stays to ditto: Sides 10 x 8 Back 9 x 8 1/4 Top 8 x 11 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 133 lbs + 132 lbs

Material of stays Steel Diameter at smallest part 1.45 Area supported by each stay 82 Working pressure by rules 152 lbs + 141 lbs End plates in steam space:

Material Steel Thickness 1 1/2 Pitch of stays 19 x 20 How are stays secured D.N. + wash Working pressure by rules 140 lbs Material of stays Steel

Area at smallest part 5.27 Area supported by each stay 380.5 Working pressure by rules 144 lbs Material of Front plates at bottom Steel

Thickness 3/4 Material of Lower back plate Steel Thickness 1/16 Greatest pitch of stays 12 1/2 Working pressure of plate by rules 174 lbs

Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 Material of tube plates Steel Thickness: Front 3/4 Back 23/32 Mean pitch of stays 11 1/4

Pitch across wide water spaces 14 1/4 Working pressures by rules 153 lbs Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 8 x 1 1/2 Length as per rule 2-3 1/11 Distance apart 11 Number and pitch of stays in each 20 8

Working pressure by rules 170 lbs Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

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

holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

VERTICAL DONKEY BOILER— *Manufacturers of Steel*

No. _____ Description _____

Made at _____ By whom made _____ When made _____ Where fixed _____

Working pressure tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safety Valves _____

Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____

If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____ Dia. of donkey boiler _____ Length _____

Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long. seams _____

Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Plates _____

Working pressure of shell by rules _____ Thickness of shell crown plates _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____

Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____

Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Stayed by _____

Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,
Lindsay Purves & Co Manufacturer

Dates of Survey while building } During progress of work in shops - - } 1907. Nov 21. 1908. Jan. 7. 18. 27. 31. Feb. 5. 13. 22. 29. March 5.
 } During erection on board vessel - - }
 Total No. of visits 10. Is the approved plan of main boiler forwarded herewith *yes.*

Dates of Examination of principal parts—Cylinders _____ Slides _____ Covers _____ " " " donkey " " "
 Pistons _____ Rods _____

Connecting rods _____ Crank shaft _____ Thrust shaft _____ Tunnel shafts _____ Screw shaft _____ Propeller _____

Stern tube _____ Steam pipes tested _____ Engine and boiler seatings _____ Engines holding down bolts _____

Completion of pumping arrangements _____ Boilers fixed _____ Engines tried under steam _____

Main boiler safety valves adjusted _____ Thickness of adjusting washers _____

Material of Crank shaft _____ Identification Mark on Do. _____ Material of Thrust shaft _____ Identification Mark on Do. _____

Material of Tunnel shafts _____ Identification Marks on Do. _____ Material of Screw shafts _____ Identification Marks on Do. _____

Material of Steam Pipes _____ Test pressure _____

General Remarks (State quality of workmanship, opinions as to class, &c. *This Boiler has been built under Special Survey; the workmanship + materials are of good quality, + when it has been satisfactorily fitted on board along with the engines, + tried under steam, they will be eligible for the notation + L.M.C. (with date) when completed.*)

The Boiler has been forwarded to Troon to be fitted on board the vessel.

Certificate (if required) to be sent to Glasgow

For fee see Engine Reports

The amount of Entry Fee. £ _____ When applied for. _____

Special £ 4. 10. 0 14/57 19. 08

Donkey Boiler Fee £ _____ When received. _____

Travelling Expenses (if any) £ _____ 19/57 19. 08

Committee's Minute **GLASGOW 30 JUN. 1908**

Assigned. *See accompanying report*

A. H. Pilditch
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

