

REPORT ON MACHINERY.

Port of Falmouth

Received at London Office

JULY 22 MAR 1904

No. in Survey held at Falmouth Date, first Survey 13th July 1903 Last Survey 14th Jan 4 1904

g. Book. 1 on the Trunks box & boiler Order 253, for S. S. Deerhound, Tons Gross 420
Net 218

Master H. Roberts Built at London By whom built Forrester & Sons When built 1882-10

Engines made at GLS By whom made R. H. Pearson & Co when made 1882

Boilers made at Falmouth By whom made Box & Co when made 1904

Registered Horse Power 70 Owners Fowey (No. 2) S. S. Co Ltd Port belonging to Fowey

Is Refrigerating Machinery fitted Is Electric Light fitted

BOILERS, &c.—Description of Engines New Main Boilers Only No. of Cylinders _____ No. of Cranks _____

No. of Cylinders _____ Length of Stroke _____ Revs. per minute _____ Dia. of Screw shaft as per rule _____ Material of as fitted _____ 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 _____

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 _____

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

No. of Tunnel shaft as per rule _____ Dia. of Crank shaft journals as per rule _____ Dia. of Crank pin _____ Size of Crank webs _____ Dia. of thrust shaft under _____

Boilers _____ 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 _____

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 _____

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 _____

When were stern tube, propeller, screw shaft, and all connections examined in dry dock _____ Is the screw shaft tunnel watertight _____

Is it fitted with a watertight door _____ worked from _____

BOILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 1319 sq Is forced draft fitted No

No. and Description of Boilers One cylindrical multitubular Working Pressure 80 lbs Tested by hydraulic pressure to 200 lbs

Date of test 6/10/03 Can each boiler be worked separately Area of fire grate in each boiler 43 sq No. and Description of safety valves to _____

each boiler Two, spring lipped Area of each valve 12.566 Pressure to which they are adjusted 85 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 11-4" Length 10-7 1/2" Material of shell plates Steel

Thickness 2 1/32" Range of tensile strength 27,532 Are they welded or flanged No Descrip. of riveting: cir. seams double zigzag long. seams double butt

Diameter of rivet holes in long. seams 27/32" Pitch of rivets 4 5/8" Lap of plates or width of butt straps 9 1/8"

Percentages of strength of longitudinal joint _____ rivets 82.4 Working pressure of shell by rules 105 lbs Size of manhole in shell 16" x 12"

Size of compensating ring 2-2 x 2-2 x 2 1/32" No. and Description of Furnaces in each boiler Two, plain Material Steel Outside diameter 3-8 1/2"

Length of plain part _____ top 7-0 1/2" Thickness of plates _____ crown 5/8" Description of longitudinal joint single butt No. of strengthening rings none

Working pressure of furnace by the rules 116 lbs Combustion chamber plates: Material Steel Thickness: Sides 17/32" Back 1/2" Top 17/32" Bottom 19/32"

Thickness of stays to ditto: Sides 9 3/4" x 9 1/2" Back 8 5/8" x 8 5/8" If stays are fitted with nuts or riveted heads Yes Working pressure by rules 102.7 lbs

Material of stays Steel Diameter at smallest part 1.24" Area supported by each stay 83 sq Working pressure by rules 116.7 lbs End plates in steam space: _____

Material Steel Thickness 2 1/32" Pitch of stays 15 3/8" How are stays secured double Working pressure by rules 102.8 lbs Material of stays Steel

Diameter at smallest part 1.84" Area supported by each stay 236 sq Working pressure by rules 12 lbs Material of Front plates at bottom Steel

Thickness 2 1/32" Material of Lower back plate Steel Thickness 9/16" Greatest pitch of stays 11 1/2" Working pressure of plate by rules 105.7

Diameter of tubes 3 1/2" Pitch of tubes 4 3/4" Material of tube plates Steel Thickness: Front 2 1/32" Back 2 1/32" Mean pitch of stays 11 7/8"

Thickness across wide water spaces 13 1/2" Working pressures by rules 102.9, 109.6 Girders to Chamber tops: Material Steel Depth and _____

Thickness of girder at centre 7 1/8" x 1 1/4" Length as per rule 31" Distance apart 8 1/2" Number and pitch of Stays in each Two, 9 3/4"

Working pressure by rules 105.1 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 _____

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

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

DONKEY BOILER— No. _____ Description None Fitted

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

Working pressure tested by hydraulic pressure to _____ No. of Certificate _____ Fire grate area _____ Description of safety valves _____

No. of safety valves _____ Area of each _____ Pressure to which they are adjusted _____ 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 _____ 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 _____

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

Working pressure of furnace by rules _____ Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } From the 13th of July to the 10th of December 1903
 { During erection on board vessel - - } From the 10th of December 1903 to the 14th of January 1904
 Total No. of visits 77 Is the approved plan of main boiler forwarded herewith Yes.

General Remarks (State quality of workmanship, opinions as to class, &c. This Boiler has been constructed under Special Survey by Messrs Cox & Co. at Falmouth. The materials and workmanship were found good and efficient when tested to 200 lbs per square inch by Hydraulic Pressure was found tight and satisfactory, all the old mountings were taken off the old boiler refitted and used again, the Safety Valves were set to 85 lbs relieving freely at that pressure with no accumulation, I therefore beg to submit for the Committee that a Special Certificate be granted for this Boiler to hold good conditionally with this being subject to the Rules as regards Surveys &c of the Society

Certificate (if required) to be sent to this office

The amount of Entry Fee..	£	:	:	When applied for,
Special	£	4	0	2/- 3/- 1904
Donkey Boiler Fee .. .	£	:	:	When received,
Travelling Expenses (if any) £	:	:	:	2/- 3/- 1904

P. H. Cooper
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute THUR. 31 MAR 1904

TUES. 31 MAY 1904



Assigned