Hull Rpt No 25165

Rpt. 4.

REPORT ON MACHINERY.

No. 7472.

Port of London

Received at London Office MON. JUN 3 1912

No. in Reg. Book. Survey held at Yarmouth Date, first Survey 5th March Last Survey 17th May 1912

(Number of Visits 5.)

on the Cochrane & Sons s.s. No. 531. St Germans 30

Tons { Gross / Net

Master Built at Selby By whom built Cochrane & Sons When built

Engines made at Yarmouth By whom made Crabtree & Co Ltd (Engines No. 163) when made 1912

s made at Stockton By whom made Riley Bros Ltd when made 1912

ered Horse Power Owners Port belonging to Lisbon

Horse Power as per Section 28 92 Is Refrigerating Machinery fitted for cargo purposes ✓ Is Electric Light fitted ✓

NES, &c.—Description of Engines Compound Surface condensing No. of Cylinders two No. of Cranks two

of Cylinders 10" & 20" Length of Stroke 15" Revs. per minute 170 Dia. of Screw shaft as per rule ~~4.67"~~ 4.36" as fitted 5" Material of screw shaft Steel

screw shaft fitted with a continuous liner the whole length of the stern tube No Is the after end of the liner made water tight

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

n the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓ If two

are fitted, is the shaft lapped or protected between the liners Two liners fitted Length of stern bush 1'-10"

INTER TE ~~Tunnel~~ shaft as per rule 4.153" as fitted 4½" Dia. of Crank shaft journals as per rule 4.36" as fitted 4¾" Dia. of Crank pin 4¾" Size of Crank webs 7"×3¼" Dia. of thrust shaft under

s 4¾" Dia. of screw 5'-0 Pitch of Screw ✓ No. of Blades 4 State whether moveable No Total surface ✓ 13 ~~ft~~

Feed pumps one Diameter of ditto 2½" Stroke 6½" Can one be overhauled while the other is at work ✓

Bilge pumps one Diameter of ditto 2½" Stroke 6½" Can one be overhauled while the other is at work ✓

Donkey Engines one Sizes of Pumps 4½"×2¾"×4" Duplex No. and size of Suctions connected to both Bilge and Donkey pumps

gine Room 2-2" 7or" 4ft In Holds, &c. 1-2" & 1 Hold.

2" Ejector Suction & all bilges with discharge on deck

Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size

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

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

ey 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

ey 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

pipes are carried through the bunkers How are they protected

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

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

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

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

ERS, &c.—(Letter for record) Manufacturers of Steel

Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers

ing Pressure Tested by hydraulic pressure to Date of test No. of Certificate

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

oiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

st distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates

ess Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

eams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

ntages of strength of longitudinal joint rivets / plate Working pressure of shell by rules Size of manhole in shell

compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

of plain part top / bottom Thickness of plates crown / bottom Description of longitudinal joint No. of strengthening rings

ng pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

f stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

al of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space:

al Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

er at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

ess Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

er of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each

Working pressure by rules 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

3m.5.3—1.

W1459-0148

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 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,

Manufacturer. Ja Gower

Dates of Survey while building — During progress of work in shops: 6/12 Mar 15 Apl 4 May 7. 13. 17.
During erection on board vessel:
Total No. of visits Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts— Cylinders 4th Apl. 7th May Slides 13th May Covers 13th May Pistons 13th May Rods 13th May
Connecting rods 13th May Crank shaft 13th May Thrust shaft 13th May Tunnel shafts 13th May Screw shaft 13th May Propeller 13th May
Stern tube 4th Apr. 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 Soft Steel Identification Mark on Do. 2974 W.D.H. Material of Thrust shaft — Identification Mark on Do. —
*& thrust.
Material of Tunnel shafts Steel Identification Marks on Do. 784 J.P. Material of Screw shafts Steel Identification Marks on Do. 783 J.P.
Material of Steam Pipes Test pressure

General Remarks (State quality of workmanship, opinions as to class, &c.)

The engines have been built under Special Survey, the material & workmanship are good. Record & date the given on completion of the survey

The machinery has been despatched to Belfast where it will be fitted in the vessel

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

Certificate (if required) to be sent to

The amount of Entry Fee..	£ 1 : 0 : 0	When applied for,	
Special 2/3 of £9 ..	£ 5 : 6 : 8	3 6 1912	
Donkey Boiler Fee	£ : :	When received,	
Travelling Expenses (if any)	£ 2 : 13 : 10	1/10/12	

A. E. Farminer
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute FRI. JUL 5 - 1912

Assigned