

Rpt. 4.

REPORT ON MACHINERY.

No. 25524

Date of writing Report 12-10-12 When handed in at Local Office 12-10-12 Port of Hull Received at London Office MON. OCT. 14. 1912
 No. in Survey held at Goole & Hull Date, First Survey Jan 25th Last Survey Oct 18th 1911
 Reg. Book. 22 on the steel screw steamer Channel Queen (Number of Vials 55)
 Master Goole Built at Goole By whom built Goole S.B. & Repairing Co. Ltd Tons { Gross 870
 Engines made at Hull By whom made Earlie & Co. Ltd Net 327
 Boilers made at Hull By whom made Earlie & Co. Ltd When built 1912-10
 Registered Horse Power 109 Owners London & Channel Islands S.B. Co. Ltd when made 1912-10
 Nom. Horse Power as per Section 28 109 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Triple Expansion Turbine Compound No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 15-25-40 Length of Stroke 27 Revs. per minute 104 Dia. of Screw shaft 6.9" Material of steel
 Is the 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 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 28"
 Dia. of Tunnel shaft 7.46" Dia. of Crank shaft journals 7.83" Dia. of Crank pin 7.7" Size of Crank webs 18"x6" Dia. of thrust shaft under collars 7.7" Dia. of screw 10'-6" Pitch of Screw 12'-0" No. of Blades 4 State whether moveable no Total surface 37"
 No. of Feed pumps two Diameter of ditto 2 1/4" Stroke 18" Can one be overhauled while the other is at work yes
 No. of Bilge pumps two Diameter of ditto 2 1/4" Stroke 18" Can one be overhauled while the other is at work yes
 No. of Donkey Engines two duplex Sizes of Pumps two 6"x6", one 4"x6" No. and size of Suctions connected to both Bilge and Donkey pumps each
 In Engine Room two 3" dia & one 3" in tunnel well In Holds, &c. two 3" Aft two 3" peaks one 3"
 No. of Bilge Injections one sizes 3 1/2" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size yes 3"
 Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes Are the sluices on Engine room bulkheads always accessible no
 Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes Are the Discharge Pipes above or below the deep water line above
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel yes Are the Blow Off Cocks fitted with a spigot and brass covering plate yes
 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 yes
 Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes
 Dates of examination of completion of fitting of Sea Connections 6-7-12 of Stern Tube 13-7-12 Screw shaft and Propeller 12-8-12
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top platform in S.R.

BOILERS, &c.—(Letter for record S) Manufacturers of Steel J. Colville & Sons
 Total Heating Surface of Boilers 1952 Is Forced Draft fitted no No. and Description of Boilers one single ended
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 29-7-12 No. of Certificate 1914
 Can each boiler be worked separately ✓ Area of fire grate in each boiler 60.4 sq ft No. and Description of Safety Valves to each boiler Two spring loaded Area of each valve 5.94 sq in Pressure to which they are adjusted 180 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 8" boiler lagged dia. of boilers 17 1/4" Length 10'-9" Material of shell plates steel
 Thickness 1 5/16" Range of tensile strength 28-32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double
 long. seams J.R. & B. 1 Diameter of rivet holes in long. seams 1 5/16" Pitch of rivets 9" Lap of plates on width of butt straps 19 1/2"
 Per centages of strength of longitudinal joint rivets F. 3. F. plate F. 5. 6 Working pressure of shell by rules 201 Size of manhole in end 16"x12"
 Size of compensating ring flanged No. and Description of Furnaces in each boiler Three Right Material steel Outside diameter 46"
 Length of plain part top bottom Thickness of plates crown 3 9/16" Description of longitudinal joint welded No. of strengthening rings ✓
 Working pressure of furnace by the rules 191 Combustion chamber plates: Material steel Thickness: Sides 2 1/32" Back 1 1/16" Top 2 1/32" Bottom 1 7/16"
 Pitch of stays to ditto: Sides 9 1/2"x8" Back 9 3/4"x8" Top 9"x8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 195
 Material of stays steel Diameter at smallest part 1 7/16" Area supported by each stay 78 sq in Working pressure by rules 180 End plates in steam space: Material steel Thickness 1 7/32" Pitch of stays 19"x18" How are stays secured S. T. Working pressure by rules 194 Material of stays steel
 Diameter at smallest part 7.39" Area supported by each stay 342 sq in Working pressure by rules 224 Material of Front plates at bottom steel
 Thickness 1 5/16" Material of Lower back plate steel Thickness 7/8" Greatest pitch of stays 13 1/2"x8 1/4" Working pressure of plate by rules 211
 Diameter of tubes 3 1/2" Pitch of tubes 4 7/8"x4 3/4" Material of tube plates steel Thickness: Front 1 5/16" Back 1 3/16" Mean pitch of stays 9 5/8"
 Pitch across wide water spaces 13 1/2" Working pressures by rules 185 lbs Girders to Chamber tops: Material steel Depth and thickness of girder at centre 9 1/2"x1 1/2" Length as per rule 33 1/4" Distance apart 9" Number and pitch of stays in each Three 8"
 Working pressure by rules 185 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 ✓

W1044-0219

VERTICAL DONKEY BOILER—

Manufacturers of Steel

pt. 5b.

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 casing 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
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.	Dia. of stays	Plates
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	Radius of do.	Stayed by		
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:—Two top end bolts & nuts, Two bottom end bolts & nuts, Two main bearing bolts & nuts, one set of coupling bolts & nuts, one set of feed, bilge, air & circulating pump valves, one main & one donkey check valve, condenser tubes & ferrules, two safety valve springs, a quantity of iron bolts & nuts of various sizes.

The foregoing is a correct description,
SHIPS BUILDING & ENGINEERING CO. LIMITED.
J. J. L. L. L. Manufacturer.

Dates of Survey while building
 During progress of work in shops -- **SECRETARY.** 1912. - Jan 25 Feb 5 9 15 16 22 26 Mar 5 8 18 21 27 30 Apr 4 19 May 1 7 9
 During erection on board vessel -- May 15 21 23 30 31 Jun 4 7 11 13 19 20 Jul 1 2 4 5 6 10 12 13 16 18 22 24 26 29 Aug 12 14 16
 Total No. of visits 55

Is the approved plan of main boiler forwarded herewith **yes**
 " " " donkey " " **yes**

Dates of Examination of principal parts—Cylinders 1-5-12 Slides 1-5-12 Covers 1-5-12 Pistons 1-5-12 Rods 1-5-12
 Connecting rods 1-5-12 Crank shaft 1-5-12 Thrust shaft 18-7-12 Tunnel shafts 29-7-12 Screw shaft 26-7-12 Propeller 12-9-12
 Stern tube 13-7-12 Steam pipes tested 20-8-12 Engine and boiler seatings 16-8-12 Engines holding down bolts 21-8-12
 Completion of pumping arrangements 22-8-12 Boilers fixed 21-8-12 Engines tried under steam 4-10-12
 Main boiler safety valves adjusted 22-8-12 Thickness of adjusting washers P13/27 S3/2
 Material of Crank shaft **steel** Identification Mark on Do. 2946 WDH Material of Thrust shaft **steel** Identification Mark on Do. 795 FLS
 Material of Tunnel shafts **steel** Identification Marks on Do. 798 FLS Material of Screw shafts **steel** Identification Marks on Do. 797 FLS
 Material of Steam Pipes **solid drawn copper** Test pressure 400 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery of this vessel has been constructed under special survey in accordance with the approved plans rules of this society, the materials & workmanship are good. The boiler has been tested by Hydraulic pressure to 360 lbs found sound & tight. The machinery has been properly fitted & secured on board & on completion was tried under steam & found to work satisfactorily. The safety valves have been adjusted & tried for accumulation 184 lbs.
 In my opinion this vessel is eligible for the record + 1/16 10-12 WP/180
 S.B. pressure to be noted 100 lbs.

It is submitted that
 this vessel is eligible for
THE BROOD + L MC. 10.12.

The amount of Entry Fee ... £ 2 0 0 When applied for, 12-10-12
 Special ... £ 16 7 2
 Donkey Boiler Fee ... £
 Travelling Expenses (if any) £ 12 8 0

Committee's Minute

TUE. OCT. 15. 12

Assigned

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



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Lloyd's Register
 Foundation

Certificate (if required) to be sent to Hull

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