

REPORT ON MACHINERY.

No.

6635

Port of

Belfast

Received at London Office

THUR. 8 JUL 1909

No. in Survey held at

Belfast

Date, first Survey 5 May 1908 Last Survey 20 June 1909

No. Book.

J.P.S. "Otranto"

(Number of Visits 18)

on the

Belfast

By whom built Parkman Clark Bay

Master

Built at Belfast

By whom made when made 1909

Engines made at

Belfast

By whom made

when made

Milers made at

By whom made

when made

Registered Horse Power

Owners

Ancient Steam Navigation Co. Ltd. Belfast

Horse Power as per Section 28

1977

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

INES, &c.—Description of Engines

Turn Screw Quadruple Expansive Cylinders 8 No. of Cranks 8

of Cylinders 29-41-59-84 Length of Stroke 60 Revs. per minute 80 Dia. of Screw shaft as per rule 16.9 Material of 1.2.10.10

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

are fitted, is the shaft lapped or protected between the liners Length of stern bush 6'-0"

of Tunnel shaft as per rule 15.8 Dia. of Crank shaft journals as per rule 16.6 Dia. of Crank pin 18" Size of Crank webs 24 1/2 x 12 Dia. of thrust shaft under

of 17 1/2 Dia. of screw 18'-6" Pitch of Screw 27'-6" No. of Blades 3 State whether moveable Total surface 90 sq ft

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

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

of Donkey Engines See other sheet No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 11-3 1/2 In Holds, &c. 12-3 1/2

of Bilge Injections 2 sizes 12" Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size 4-4 1/2

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

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

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 Both

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 Four hold suction How are they protected Wood casings

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

dates of examination of completion of fitting of Sea Connections 27-3-09 of Stern Tube 18-3-09 Screw shaft and Propeller 18-3-09

the Screw Shaft Tunnel watertight Stated to be fitted with a watertight door worked from Engine Room Top Platform

ILERS, &c.—(Letter for record 5) Manufacturers of Steel Parkman Clark & Co.

Total Heating Surface of Boilers 24708 sq ft Forced Draft fitted No. and Description of Boilers 4-Water End Cylind.

Working Pressure 215 lbs Tested by hydraulic pressure to 430 lbs Date of test 26-1-09 No. of Certificate 415

in each boiler be worked separately Area of fire grate in each boiler 1465 sq ft No. and Description of Safety Valves to

each boiler Two-Safety Valves Area of each valve 12.56 sq Pressure to which they are adjusted 215 lbs Are they fitted with easing gear

smallest distance between boilers or uptakes and bunkers or woodwork 18 in Mean dia. of boilers 16'-4 1/2 Length 20'-2 1/2 Material of shell plates Steel

thickness 1/8 Range of tensile strength 3 1/2-55 lbs Are the shell plates welded or flanged No Descrip. of riveting: cir. seam L.P.S.

ing. seams Butt Seams Diameter of rivet holes in long. seams 1 1/4 Pitch of rivets 10 Top of plates or width of butt straps 23 1/2

Per centages of strength of longitudinal joint rivets 102.5 Working pressure of shell by rules 251 lbs Size of manhole in shell 16" x 12"

Size of compensating ring M. Neils No. and Description of Furnaces in each boiler 8-Weighted Material Steel Outside diameter 44 1/2

length of plain part top 2 Thickness of plates crown 3 1/4 Description of longitudinal joint Weld No. of strengthening rings 2 To an

Working pressure of furnace by the rules 234 lbs Combustion chamber plates: Material Steel Thickness: Sides 3/2 Back 1/2 Top 3/2 Bottom 1/2

Pitch of stays to ditto: Side 8 1/2 x 7 3/8 Back 8 1/2 x 6 1/2 Top 8 1/2 x 6 1/2 If stays are fitted with nuts or riveted heads But inside

Material of stays Steel Diameter at smallest part 1 1/2 Area supported by each stay 62 1/2 Working pressure by rules 251 lbs and plates in steam space:

Material Steel Thickness 1/4 Pitch of stays 20 5/8 x 16 How are stays secured But inside Working pressure by rules 217 lbs Material of stays Steel

Diameter at smallest part 2 1/2 Area supported by each stay 130 sq Working pressure by rules 247 lbs Material of Front plates at bottom Steel

Thickness 1/2 Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes 2 1/2 Pitch of tubes 3 1/4 x 8 1/2 Material of tube plate Steel Thickness: Front 3/2 Back 1/2 Mean pitch of stays 7 1/2 x 7 1/2

Pitch across wide water spaces 13 1/2 Working pressures by rules 259 lbs Chamber tops: Material Steel Depth and

thickness of girder at centre 9 1/2 x (3/4 x 2) Length as per rule 53 1/2 Distance apart 8 1/2 x 7 1/2 Number and pitch of stays in each 6-6 1/2

Working pressure by rules 227 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

11806-0050

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 _____
 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 _____
 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:—

*As tow and knots; 2 pairs bottom end
 buccies; 4 pair top end buccies; 2 pair guide shoes; 2 screws & 2
 knots; 2 slide valves & spindles; 2 sets packing rings & pumps for 4 pistons
 1 set packing rings for 2 pistons valves; 4 thrust block shoes; 2 pumps
 blades; 2 screws for pumps etc. and all fees
 2 days wages additional.*

The foregoing is a correct description,
 FOR WORKMAN, CLARK & CO., LIMITED

Manufacturer.

Dates of Survey while building { During progress of work in shops - 1908 May 5. 8. 13. 16. 21. 22. 29 June 2. 9. 12. 15. 17. 19. 23 July 1. 3. 8.
 { During erection on board vessel - 24. 28. 30 Aug 5. 11. 14. 20. 24 Sep 30th June 1909.
 Total No. of visits 131

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 9-6-08 Covers 10-6-08 Pistons 10-6-08 Rods 10-6-08
 Connecting rods 10-3-09 Crank shaft 20-6-08 Tunnel shafts 20-6-08 Screw shaft 2-1-09 Propeller 24-1-09
 Stern tube 18-1-09 Steam pipes tested 24-2-09 Engine and boiler seatings 21-4-09 Engines holding down bolts 14-6-09
 Completion of pumping arrangements 31-5-09 Boilers fixed 21-4-09 Engines tried under steam 4-6-09
 Main boiler safety valves adjusted 4-6-09 Thickness of adjusting washers 60/16"
 Material of Crank shaft 1. S. 108 Identification Mark on Do. 2. 108 Material of Thrust shaft 1. S. 108 Identification Mark on Do. 1. S. 108
 Material of Tunnel shafts 1. S. 108 Identification Marks on Do. 1. S. 108 Material of Screw shafts 1. S. 108 Identification Marks on Do. 1. S. 108
 Material of Steam Pipes 1. S. 108 Test pressure 650 lbs.

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

The machinery of this vessel has been examined under Special Licence, and in accordance with the Rules. It has been securely fitted on board, and on trial under steam, it worked satisfactorily, with the exception of the main boiler safety valves. Provided these be overhauled and adjusted as detailed in my letter to the Secretary of 1st July I am of opinion this vessel will merit the favourable opinion of the Committee for record + L.M.C. (with date); also notation "Forced Draft" "Electric Light".

It is submitted that
 this vessel is eligible for
 THE RECORD.

+ L.M.C. 4.0.9
 APR 7.0.9 Ref. mch.
 29.7.09

The amount of Entry Fee... £ 3 : 0 :
 Special ... £ 16 : 14 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 4-7-09
 When received, 6-7-09

Committee's Minute

FRI. 30 JUL 1909

FRI. 1 OCT 1909

Assigned

MACHINERY CERTIFICATE
 WRITTEN

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 Foundation