

REPORT ON MACHINERY.

No. 6328

Port of Belfast Received at London Office THUR. JUL 4 1907

No. in Survey held at Belfast Date, first Survey 6 June 1906 Last Survey 28 June 1907

Reg. Book. S.S. "Prahsu" (Number of Visits 43)

Master Built at Belfast By whom built Hanland & Wylly Tons { Gross 3756 Net 2311 When built 1907

Engines made at Belfast By whom made " when made "

Boilers made at " By whom made " when made "

Registered Horse Power " Owners Eller Dempster & Co Port belonging to Liverpool

Nom. Horse Power as per Section 28 528 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 26-44-74 Length of Stroke 48 Revs. per minute 76 Dia. of Screw shaft as per rule 14.18 Material of S. Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight

in the propeller boss Yes If the liner is in more than one length are the joints burned Yes 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 Yes If two

liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 63"

Dia. of Tunnel shaft as per rule 13.78 Dia. of Crank shaft journals as per rule 14.38 Dia. of Crank pin 15 Size of Crank web 21x103 Dia. of thrust shaft under

collars 14.34 Dia. of screw 17.8 Pitch of Screw 18-0 No. of Blades 4 State whether moveable Yes Total surface 84 1/2 sq ft.

No. of Feed pumps 2 Diameter of ditto 4 1/2 Stroke 28 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4 Stroke 28 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 4 Sizes of Pumps 8x10 1/2 x 18 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 3-8 1/2 Vertical 9x12 In Hold, &c. 4-8 1/2 x 4-3

No. of Bilge Injections / sizes 8" Connected to condenser, or to circulating pump By a separate Donkey Suction fitted in Engine room & size 8-3 1/2

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 Yes

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 Below

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 Fore hold suction How are they protected Wood casing

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 7-3-07 of Stern Tube 7-3-07 Screw shaft and Propeller 7-3-07

Is the Screw Shaft Tunnel watertight Sealed & fitted with a watertight door worked from Upper deck

BOILERS, &c.—(Letter for record Yes) Manufacturers of Steel Colville & Sons

Total Heating Surface of Boilers 7395 sq ft. Forced Draft fitted Yes No. and Description of Boilers 3-Single End Cylind.

Working Pressure 205 Tested by hydraulic pressure to 410 lbs Date of test 17-5-17 No. of Certificate 400

Can each boiler be worked separately Yes Area of fire grate in each boiler 55 1/2 sq ft. No. and Description of Safety Valves to

each boiler 2-Rivet Pump of each valve 8.29 sq in pressure to which they are adjusted 205 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork About 5 ft. Mean dia. of boilers 14-5 Length 11-9 Material of shell plates Steel

Thickness 1 1/2 Range of tensile strength 29-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams L. Ribble

long. seams Butt Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 9 1/2 Top of plates or width of butt straps 22 1/2

Per centages of strength of longitudinal joint rivets 94.4 Working pressure of shell by rules 236 lbs Size of manhole in shell 16"x12"

Size of compensating ring No No. and Description of Furnaces in each boiler 3-Braun's Compound Side diameter 46 1/2

Length of plain part top 9" Thickness of plates crown 3 1/2 Description of longitudinal joint Weld No. of strengthening rings 1

Working pressure of furnace by the rules 411 lbs Combustion chamber plates: Material Steel Thickness: Sides 19 1/2 Back 19 1/2 Top 19 1/2 Bottom 7

Pitch of stays to ditto: Sides 7 1/2 x 7 1/2 Back 13 x 13 Top 8 1/2 x 7 1/2 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 209 lbs

Material of stays Steel Diameter at smallest part 1 1/8 Are they supported by each stay Yes Working pressure by rules 232 lbs End plates in steam space:

Material Steel Thickness 1 1/2 Pitch of stays 8 1/2 x 15 1/4 How are stays secured Nuts Working pressure by rules 238 lbs Material of stays Steel

Diameter at smallest part 2 1/8 Area supported by each stay 286 1/4 Working pressure by rules 225 lbs Material of Front plates at bottom Steel

Thickness 1 1/2 Material of Lower back plate Steel Thickness 1 1/2 Greatest pitch of stays 12 1/2 Working pressure of plate by rules 15 lbs

Diameter of tubes 2 1/2 Pitch of tubes 3 1/2 x 3 1/2 Material of tube plates Steel Thickness: Front 1 1/2 Back 1 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 380 lbs Are they supported by stays to Chamber tops: Material Iron Depth and

thickness of girder at centre 9 x (8 x 2) Length as per rule 29 1/2 Distance apart 9 1/2 Number and pitch of stays in each 3-7 1/2

Working pressure by rules 215 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 "

W575-0135

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 S _____
 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:— 2 Propeller blades, same crank pin bushes
 4 P valve spindle. L.P. do. 2 set piston rings each cylinder, impeller for
 centrifugal pump, air pump and bucket, Condenser tubes set
 all gear to Lloyd's Register Extra. For Harland & Wolff Ltd
 The foregoing is a correct description,
 Manufacturer. *HB*

Dates of Survey while building { During progress of work in shops - 1906. June 6. Nov 27. Dec 5, 11, 17. Jan 4. 9, 25. Feb 1. 4, 7.
 { During erection on board vessel - 14. 20 March 1. 5. 6. 12. 22. 25. 26. April 5. 9 up to 28 June
 Total No. of visits 43
 Is the approved plan of main boiler forwarded herewith *Yes*

Dates of Examination of principal parts—Cylinders 9 Slides 10 7 Covers Piston Rods
 Connecting rods 21-5-07 Crank shaft 5 Thrust shaft 06 Tunnel shafts 5 Screw shaft 22-3-07
 Stern tube 7-3-07 Steam pipes tested 24-5-07 Engine and boiler seatings 29-5-07 Engines holding down bolts 29-5-07
 Completion of pumping arrangements 28-6-07 Boilers fixed 11-6-07 Engines tried under steam 18-6-07
 Main boiler safety valves adjusted 18-6-07 Thickness of adjusting washers 12-13-07
 Material of Crank shaft *1. Steel* Identification Mark on Do. *7.5.13* Material of Thrust shaft *Alloy* Identification Mark on Do. *40*
 Material of Tunnel shafts *Alloy* Identification Marks on Do. *21-3-07* Material of Screw shafts *Alloy* Identification Marks on Do. *40*
 Material of Steam Pipes *Solid Wrought Steel* Test pressure 650 lbs

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

The machinery of this vessel, has been constructed under Special License, and in accordance with the Rules. The material and the workmanship are of good description throughout, and on trial under steam, the machinery worked satisfactorily. In my opinion, it is eligible for Record + L.M.C. 6-07 with notation Forced Draft & Electric Light.

This vessel's machinery is a duplicate of that fitted in the S.S. "Harris" "Serra Leone" & "Palani".

It is submitted that this vessel is eligible for THE RECORD + LMC 6-07. Elec light F.D.

The amount of Entry Fee.. £ 3 : - :
 Special £ 46 : 8 :
 Donkey Boiler Fee £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 2-7-07
 When received, 9-7-07

Committee's Minute

Assigned

FRI. 5 JUL 1907

+ L.M.C. 6-07
 F.D. Elec. Light

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



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