

Rpt. 4.

REPORT ON MACHINERY.

No. 8154
MON. 7-JUL. 1919Date of writing Report 30th June 1919 When handed in at Local Office 10 Port of BelfastNo. in Survey held at Belfast Date, First Survey 1st Oct 1918 Last Survey 26th June 1919
Reg. Book. on the S.S. "Sallygally Head" (Number of Visits 28) Gross 5179 Tons Net 3166 Tons When built 1919

Master Built at Belfast By whom built Workman Clark & Coy. Ltd. when made

Engines made at Belfast By whom made when made

Boilers made at By whom made when made

Registered Horse Power Owners Ulster Steamship Coy. Ltd. Port belonging to Belfast

Nom. Horse Power as per Section 28 518 517 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

No. of Cylinders 3 No. of Cranks 3

Description of Engines Single Screw Triple Expansion of Cylinders 14-7 14-6 Material of I. Steel

Dia. of Cylinders 27"-44"-73" Length of Stroke 48" Revs. per minute 78 Dia. of Screw shaft 14-7 14-6 as fitted 15-5 screw shaft

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 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 60 1/2"

Dia. of Tunnel shaft as per rule 13-3" Dia. of Crank shaft journals as per rule 13-9" Dia. of Crank pin 14 1/2" Size of Crank web 28" x 9" Dia. of thrust shaft under

collars 14 1/2" Dia. of screw 17-6" Pitch of Screw 16-6" No. of Blades 4 State whether movable Yes Total surface 87 sq ft.

No. of Feed pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 4-3 1/2" In Holds, &c. 10-3 1/2" 3-3" 4-2 1/2"

No. of Bilge Injections 1 sizes 12" Connected to condenser, or to circulating pump Pump Is a separate Donkey Suction fitted in Engine room & size Yes-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

Are all connections with the sea direct on the skin of the ship Except on the tank injection 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 level 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

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top platform E. Room

Boilers, &c.—(Letter for record S) Manufacturers of Steel Reid & Talbot Steel Coy. Ltd.

Total Heating Surface of Boilers 668 sq ft Forced Draft fitted Yes No. and Description of Boilers 3 Single End Cylindrical

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 16-5-19 No. of Certificate 3413

Can each boiler be worked separately Yes Area of fire grate in each boiler 63 1/2 sq ft No. and Description of Safety Valves to

each boiler 2- Direct Spring Area of each valve 9.62 sq Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 2 ft dia. of boilers 15-6 Length 11-6 Material of shell plates Steel

Thickness 1/4" Range of tensile strength 28-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Lap S. Riv.

long. seam 1/2" Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 9 1/2" Lap of plates or width of butt straps 19 1/2"

Per centages of strength of longitudinal joint rivets 88.3 Working pressure of shell by rules 182 lbs Size of manhole in shell 16" x 12"

Size of compensating ring Plate flanged No. and Description of Furnaces in each boiler 3 Lighter Material Steel Outside diameter 50 3/16"

Length of plain part top 5- Thickness of plates crown 3 1/2" Description of longitudinal joint Weld No. of strengthening rings

Working pressure of furnace by the rules 180 lbs Combustion chamber plates: Material Steel Thickness: Sides 3/32 Back 1/16 Top 23/32 Bottom 23/32

Pitch of stays to ditto: Sides 10 5/8 x 9 1/4 Back 9 1/2 x 8 1/4 If stays are fitted with nuts or riveted heads into inside Working pressure by rules 180 lbs

Material of stay Steel Area at smallest part 2 3/8 x 3 3/4 Area supported by each stay 98 1/4 sq Working pressure by rules 180 lbs and plates in steam space:

Material Steel Thickness 1/32 Pitch of stays 2 1/2 x 2 1/2 How are stays secured Nuts Working pressure by rules 180 lbs Material of stays Steel

Area at smallest part 8 1/2 x 9 1/2 Area supported by each stay 459 1/2 sq Working pressure by rules 187 lbs Material of Front plates at bottom Steel

Thickness 7/8 Material of Lower back plate Steel Thickness 23/32 Greatest pitch of stays 13 5/8 Working pressure of plate by rules 189 lbs

Diameter of tubes 2 1/4 Pitch of tubes 4 x 3 1/8 Material of tube plate Steel Thickness: Front 3/32 Back 1/4 Mean pitch of stays 12 x 7 1/4

Pitch across wide water spaces 13 5/8 Working pressures by rules 181 lbs Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 10 x (8 x 2) Length as per rule 35 1/2 Distance apart 10 5/8 Number and pitch of stays in each 3-9 1/4

Working pressure by rules 182 lbs Steam dome: description of joint to shell

Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:— *See other sheet*

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

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } *5th April 1918 to 26th June 1919*
{ During erection on board vessel -- }
Total No. of visits *48*

Is the approved plan of main boiler forwarded herewith *No - B Plan*

Dates of Examination of principal parts—Cylinders *1st Slides 18* Covers *5* Pistons *5* Rods *5*
Connecting rods *23-5-19* Crank shaft *17-7-19* Thrust shaft *5* Tunnel shafts *5* Screw shaft *23-5-19* Propeller *23-5-19*
Stern tube *23-5-19* Steam pipes tested *16-6-19* Engine and boiler seatings *5-6-19* Engines holding down bolts *9-6-19*
Completion of pumping arrangements *26-6-19* Boilers fixed *5-6-19* Engines tried under steam *21-6-19*
Completion of fitting sea connections *26-5-19* Stern tube *28-5-19* Screw shaft and propeller *28-5-19*
Main boiler safety valves adjusted *21-6-19* Thickness of adjusting washers *7-12-32*
Material of Crank shaft *Steel* Identification Mark on Do. *LLOYDS 8-5-19* Material of Thrust shaft *do* Identification Mark on Do. *LLOYDS 17-5-19*
Material of Tunnel shafts *do* Identification Marks on Do. *do* Material of Screw shafts *do* Identification Marks on Do. *do*
Material of Steam Pipes *W. Iron* Test pressure *600 lbs. sq.*

Is an installation fitted for burning oil fuel *No* Is the flash point of the oil to be used over 150°F. *✓*

Have the requirements of Section 49. of the Rules been complied with *✓*

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *S.P. "Munier"*

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

The machinery of this vessel has been constructed under Special Survey, and in accordance with the Rules. The workmanship and the materials are of good description, and on trial in Belfast Lough, the machinery worked satisfactorily. In my opinion, it is eligible for records + L.M.C. 6-19 with notation "Forced Draft" and "Electric Light"

The suction pipe from the General Donkey Pump to the main ballast line, has not been removed as recommended, as the owners do not intend to carry oil in the tanks at present. See letter from builder attached.

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 6. 19. F.D.

The amount of Entry Fee £ *3* : 0 :
Additional percentage *5* : 18 :
Donkey Boiler Fee £ *17* : 0 :
Travelling Expenses (if any) £ : :
When applied for, *3-7-1919*
When received, *17-7-1919*

Committee's Minute *FRI. 11 JUL. 1919*

Assigned

R. F. O'Brien
Engineer Surveyor to Lloyd's Register of Shipping.

MACHINERY CERTIFICATE
WRITTEN

FRI. OCT. 8 1920

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Lloyd's Register
Foundation

S.S. Ballygalley Head

Auxiliary Pumps

- 2 Main Feed pumps 8" x 10 1/2" x 21"
 1 General Service - 7" x 5" x 8"
 1 Ballast - 9" x 11" x 10"

Principal items Spare Gear

- 4 Connecting Rod top & bottom end bolts & nuts
 2 Main bearings - - -
 2 Bottom end bushes
 Set coupling bolts
 Set Feed & Bilge pump valves
 6 Cauden feed Check valves
 2 Propeller blades (C. Iron)
 Spare metallic packing for piston glands
 12 Condenser tubes & 50 flange nuts
 6 Air pump valves
 Feed pump escape valve springs
 Filter basket & cone filter
 Fire bars, baffle plates etc
 Spare gear for aux^y pumps.
 Studs, nuts, bolts, pins etc.

R. M. Bennett

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