

REPORT ON MACHINERY.

No. 40166

Received at London Office

THU. JUL. 15 1920

Writing Report 9th July 1920 When handed in at Local Office 9th July 1920 Port of Glasgow
Date, First Survey 11th 11th 19th Last Survey 8th July 1920
(Number of Visits 39)

Survey held at Glasgow
on the SS "Olympic"
Built at Glasgow By whom built Lloyd Royal Belge - no 4
When built 1920

By whom made Dunsmuir & Jackson
By whom made Dunsmuir & Jackson
Is Electric Light fitted Yes

Owners Lloyd Royal Belge Soc anon. Port belonging to Antwerp
Is Refrigerating Machinery fitted for cargo purposes No

Horse Power as per Section 28 544
No. of Cylinders 3 No. of Cranks 3

Types, &c. — Description of Engines Triple Expansion
Length of Stroke 51 Revs. per minute 76
Dia. of Screw shaft as per rule 15.28
Material of screw shaft S

of Cylinders 26 1/2 x 44 x 73
Is the after end of the liner made water tight
If the liner does not fit tightly at the part

screw shaft fitted with a continuous liner the whole length of the stern tube Yes
If the liner is in more than one length are the joints burned Yes
If two

on the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes
Length of stern bush 63"

are fitted, is the shaft lapped or protected between the liners
Dia. of Crank pin 15 1/4" Size of Crank webs 22 x 10" Dia. of thrust shaft under

of Tunnel shaft as per rule 13.97
Dia. of Crank shaft journals as per rule 14.66
Dia. of Crank pin 15 1/4" State whether moveable Yes Total surface 107 sq ft

of Feed pumps 2 Diameter of ditto 4 1/4" Stroke 26" Can one be overhauled while the other is at work Yes
of Bilge pumps 2 Diameter of ditto 4 1/4" Stroke 26" Can one be overhauled while the other is at work Yes

of Donkey Engines 5 Sizes of Pumps 1 - 4 1/2 x 10 1/2 x 2 1/2 Ballast 9 x 10 x 10
In Holds, &c. No. 1 Hold 2 @ 3 1/2 No. 2 hold 2 @ 3 1/2

Engine Room 2 @ 3 1/2 Strokehold 2 @ 3 1/2
3 hold (deep tank) 2 @ 3 1/2 10 1/4 hold 1 @ 3 1/2 Sunnel well 1 @ 3 1/2
of Bilge Injections 1 sizes 8" Connected to condenser, or to circulating pump C.P. 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 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/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 Forward Bilge suction How are they protected Strong wood casings

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 7-6-20 of Stern Tube 7-6-20 Screw shaft and Propeller 7-6-20
Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from upper platform

OILERS, &c. — (Letter for record S) Manufacturers of Steel MacAlister & Sons J. Spencer & Sons
Total Heating Surface of Boilers 8523 Is Forced Draft fitted Yes No. and Description of Boilers 3 Single ended multitubular
Working Pressure 200 Tested by hydraulic pressure to 400 lbs Date of test 20/28-5-20 No. of Certificate 15306-15307

Can each boiler be worked separately Yes Area of fire grate in each boiler 59.8 sq ft No. and Description of Safety Valves to
each boiler Two spring loaded Area of each valve 8.29 sq ft 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 20" dia. of boilers 15-3" Length 12-6" Material of shell plates S
Thickness 1 1/32" Range of tensile strength 28/32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams L.D.R.

long. seams T.R.D.S. Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 9 9/16" width of butt straps 20 1/2"
Per centages of strength of longitudinal joint rivets 85.7 Working pressure of shell by rules 200 Size of manhole in shell 16" x 12"

Size of compensating ring 8 1/2 x 1 1/32 No. and Description of Furnaces in each boiler 3 Corrugated Material S Outside diameter 47 1/2"
Length of plain part top 39/64 Description of longitudinal joint crown held No. of strengthening rings None

Working pressure of furnace by the rules 210 Combustion chamber plates: Material S Thickness: Sides 23/32 Back 23/32 Top 23/32 Bottom 7/8"
Pitch of stays to ditto: Sides 9 3/8 x 9 1/4 Back 9 1/2 x 9 1/4 Top 9 1/8 x 8 7/8 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 200 End plates in steam space:

Material of stays S Diameter at smallest part 1 9/8 Area supported by each stay 89.06 Working pressure by rules 204 Material of stays S
Material S Thickness 15/16" Pitch of stays 20 1/2 x 18 1/4 How are stays secured D. nuts Working pressure by rules 201 Material of Front plates at bottom S

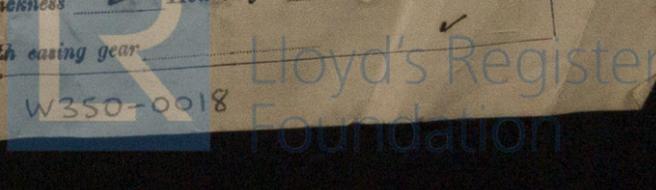
Thickness 1 1/64" Material of Lower back plate S Thickness 6 1/64" Greatest pitch of stays 14 3/4 x 9 3/8 Working pressure of plate by rules 201
Diameter of tubes 2 1/2" Pitch of tubes 3 3/4 x 3 3/4 Material of tube plates S Thickness: Front 1 1/64" Back 27/32" Mean pitch of stays 10"

Pitch across wide water spaces 13 1/2" Working pressures by rules 203 Girders to Chamber tops: Material S Depth and
thickness of girder at centre 10 1/2 x 2 Length as per rule 38 7/16 Distance apart 9 15/16 Number and pitch of stays in each 3 @ 8 7/8"

Working pressure by rules 203 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



W350-0018

VERTICAL DONKEY BOILER — Manufacturers of Steel

No.	Description			
Made at	By whom made	When made	Where fitted	
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area
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
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	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:— 1 set each of top & bottom end, main bearing & coupling bolts & nuts; 1 set each of lead, belts & air pump valves, main and donkey check valves, rings for each piston, & for HP piston valve; 1 pair bottom end braces & 2 pair top end braces, 4 C.I. propeller blades, 1 screw shaft, 2 eccentric straps, 1 slide valve rod; 1 air pump rod, 2 S. Valve springs, 1 escape valve spring, 6 boiler tubes, 6 condenser tubes & 30 ferrules, assorted junk ring bolts, caps, cover studs, 1 cylinder, 1 crank shaft, 1 impeller & shaft for circulating pump, spare valves & rings for donkey pumps, assorted bar iron, bolts & nuts, 9 studs for propeller blades.

The foregoing is a correct description,
 For BUNSMUIR & JACKSON, Limited.

Manager: Jas. H. Adams Manufacturer.

Dates of Survey while building	During progress of work in shops	1919 Nov 18-11-25 Dec 1-5-23	1920 Jan 12-16-18 Feb 5-17-26 Mar 2-9-11-15-17-23-29	Apr 1-14-20
	During erection on board vessel	29 May 3-12-13-19-24-28	June 1-11-9-17-18-23-30	July 1-5-8
Total No. of visits		39	Is the approved plan of main boiler forwarded herewith <input checked="" type="checkbox"/>	
			" " " donkey " " " <input checked="" type="checkbox"/>	

Dates of Examination of principal parts—Cylinders 19-5-20 Slides 4-6-20 Covers 19-5-20 Pistons 24-5-20 Rods 4-6-20

Connecting rods 13-5-20 Crank shaft 20-4-20 Thrust shaft 20-4-20 Tunnel shafts 13-5-20 Screw shaft 3-5-20 Propeller 3-5-20

Stern tube 12-5-20 Steam pipes tested 4 7/23/6/20 Engine and boiler seatings 7-6-20 Engines holding down bolts 18-6-20

Completion of pumping arrangements 1-7-20 Boilers fixed 18-6-20 Engines tried under steam 8-7-20

Main boiler safety valves adjusted 30-6-20 Thickness of adjusting washers: P. P.V. 3/8 S.V. 1/2 C. 1/16 P.V. 3/8 S.V. 5/16

Material of Crank shaft S Identification Mark on Do. 20-4-20 JES Material of Thrust shaft S Identification Mark on Do. 20-4-20 JES

Material of Tunnel shafts S Identification Marks on Do. 13-5-20 JES Material of Screw shafts S Identification Marks on Do. 3-5-20 JES

Material of Steam Pipes Lap welded iron Test pressure 100 lbs

General Remarks (State quality of workmanship, opinions as to class, &c.) These Lignier Boilers have been built under special survey and in accordance with the Rules, the materials and workmanship are sound & good, they have been fitted on board in an efficient manner tried under working conditions and found satisfactory and are eligible in our opinion to be classed with record of L.M.C. 7-20 in the Register's Book.

GLASGOW

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

The amount of Entry Fee	£ 3 : 0 : 0	When applied for	14-7-20
Special	£ 48 : 14 : -		
Donkey Boiler Fee	£ : : -	When received	16/7/20
Travelling Expenses (if any)	£ : : -		

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

Committee's Minute **GLASGOW 14 JUL 1920**

Assigned + LMC 7.20

