

REPORT ON MACHINERY

No. 11105

Date of writing Report 14th Dec 1921. When handed in at Local Office 16th Dec 1921. Port of Southampton.
 Date, First Survey Nov 1921. Last Survey 8th Dec 1921.
 (Number of Visits 58.)

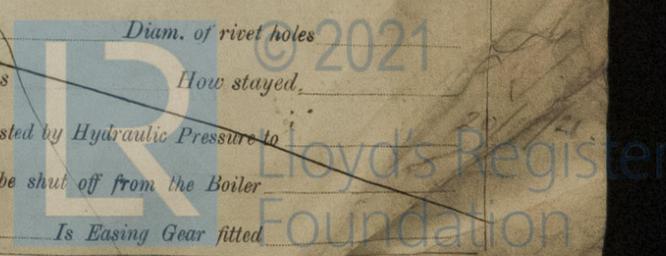
No. in Survey held at Southampton Reg. Book. 38924 on the STS "LEASOWE"
 Master Southampton Built at Southampton By whom built J. I. Thornycroft & Co. Ltd
 Engines made at Southampton By whom made J. I. Thornycroft & Co. Ltd when made 1921
 Boilers made at Southampton By whom made J. I. Thornycroft & Co. Ltd when made 1921
 Registered Horse Power _____ Owners Corporation of Wallasey Port belonging to Liverpool
 Nom. Horse Power as per Section 28 208 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Twin Triple expansion No. of Cylinders 6 No. of Cranks 6
 Dia. of Cylinders 14 1/2", 23 1/2", 38" Length of Stroke 24" Revs. per minute 128 Dia. of Screw shaft 7.93" Material of S
 as fitted 8 1/2" screw shaft
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube no liner 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 3'-0"
 Dia. of Tunnel shaft 6 1/2" Dia. of Crank shaft journals 4.35" Dia. of Crank pin 7 3/8" Size of Crank webs 14 1/2" x 5 1/2" of thrust shaft under
 collars 7 3/8" Dia. of screw 8-9 Pitch of Screw 11'-5" No. of Blades 3 State whether moveable no Total surface 19 sq ft
 No. of Feed pumps 2 Diameter of ditto 4 1/2" Stroke ✓ Can one be overhauled while the other is at work ✓
 No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke ✓ Can one be overhauled while the other is at work ✓
 No. of Donkey Engines 5 Sizes of Pumps the general service 7 1/2" x 5" x 10" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two - 2 1/2" In Holds, &c. Two - 2 1/2"

No. of Bilge Injections 1 sizes 8" Connected to condenser, or to circulating pump no Is a separate Donkey Suction fitted in Engine room & size yes 2 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.
 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 None. 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.
 Is the Screw Shaft Tunnel watertight ✓ Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Stewart and Lloyd's
 Total Heating Surface of Boilers 3939 sq ft Is Forced Draft fitted no No. and Description of Boilers 3 Single-ended
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 Date of test 21.9.21 No. of Certificate 357
 Can each boiler be worked separately yes Area of fire grate in each boiler 42 sq ft No. and Description of Safety Valves to
 each boiler 2 Spring-loaded Dia. of each valve 2 1/2" Pressure to which they are adjusted 183 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 1'-8 1/2" Mean dia. of boilers 11'-6" Length 10'-9" Material of shell plates S
 Thickness 1 1/16" Range of tensile strength 24-33 Are the shell plates welded or flanged no Descrip. of riveting: cir. DR
 long. seams TRDBS Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 7 5/8" Lap of plates or width of butt straps 1'-4 3/4"
 Per centages of strength of longitudinal joint rivets 85.25 Working pressure of shell by rules 202 Size of manhole in shell 12" x 16"
 plate 85.24 No. and Description of Furnaces in each boiler Two Corrugated Material S Outside diameter 3'-9"
 Length of plain part top 11" Thickness of plates crown 9 1/16" Description of longitudinal joint Welded No. of strengthening rings ✓
 bottom 11" bottom 9 1/16" Working pressure of furnace by the rules 196 Combustion chamber plates: Material S Thickness: Sides 5/8" Back 19/32" Top 5/8" Bottom 7/8"
 Pitch of stays to ditto: Sides 8 3/4" x 8 1/4" Back 8 1/4" x 8 1/4" Top 8 1/4" x 8 1/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180
 Material of stays S Area at smallest part 1.73 sq in Area supported by each stay 72.2 Working pressure by rules 192 End plates in steam space:
 Material S Thickness 31/32" Pitch of stays 16" x 15 1/2" How are stays secured Ns x Ws Working pressure by rules 193 Material of stays S
 Area at smallest part 5.05 sq in Area supported by each stay 248 Working pressure by rules 212 Material of Front plates at bottom S
 Thickness 7/8" Material of Lower back plate S Thickness 25/32" Greatest pitch of stays 13" x 8 1/8" Working pressure of plate by rules 191
 Diameter of tubes 3" Pitch of tubes 4" x 4 1/8" Material of tube plates S Thickness: Front 7/8" Back 3/4" Mean pitch of stays 8" x 12 3/8"
 Pitch across wide water spaces 13 1/4" Working pressures by rules 180 Girders to Chamber tops: Material S Depth and
 thickness of girder at centre 8" x 13/16" Length as per rule 2'-6 1/2" Distance apart 8 1/4" Number and pitch of stays in each 2 at 8 3/4"
 Working pressure by rules 202 Steam dome: description of joint to shell _____ % of strength of joint _____
 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 _____

008186-008200-0158



IS A DONKEY BOILER FITTED? 710.

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Two each top and bottom end connecting rod bolts and nuts, two main bearing bolts and nuts, one set of Coupling bolts and nuts, one set each feed and bilge pump valves, iron of various sizes, a quantity of assorted bolts, nuts, etc., two oil fuel sprayers, eight oil fuel sprayer caps.



The foregoing is a correct description,

A. J. Gibson for Manufacturer.
J. J. Thorneycroft & Co.

Dates of Survey while building	During progress of work in shops --	1.9.24.30	4.14.22	3.11.20.25.26	1.9.10.18.	4.14.21	4.6.9.14.23.25
		11-20.	12-20	1-21.	2-21.	3-21	4-21.
		4.9.10.24	1.27.	4.8.11.13.18.26.28.	9.15.25.	6.16.21.30.	
	During erection on board vessel ---	5-21.	6-21	7-21.	8-21	9-21.	
		3.14.22.25.26.30.	16.28.30	2.3.5.8			
		10-21.	11-21.	12-21.			
Total No. of visits		Is the approved plan of main boiler forwarded herewith					

58.

Dates of Examination of principal parts—Cylinders 6.9.21. Slides 6.9.21. Covers 6.9.21. Pistons 16.9.21. Rods 16.9.21. Connecting rods 21.9.21. Crank shaft 3.10.21. Thrust shaft 3.10.21. Tunnel shafts 3.10.21. Screw shaft 25.8.21. Propeller 25.8.21. Stern tube 25.8.21. Steam pipes tested 26.10.21. Engine and boiler seatings 16.9.21. Engines holding down bolts 25.10.21. Completion of pumping arrangements 8.12.21. Boilers fixed 25.10.21. Engines tried under steam 8.12.21. Completion of fitting sea connections 16.9.21. Stern tube 16.9.21. Screw shaft and propeller 16.9.21. Main boiler safety valves adjusted 3.12.21. Thickness of adjusting washers SBS 3/4" P. 16 CBS 49" 27" 19" 9" P. 833. Material of Crank shaft S. Identification Mark on Do. S. 832. Material of Thrust shaft S. Identification Mark on Do. P. 815. Material of Tunnel shafts S. Identification Marks on Do. P. 814. Material of Screw shafts S. Identification Marks on Do. P. 790. Material of Steam Pipes Copper. Test pressure 360 lbs. S. 791.

Is an installation fitted for burning oil fuel yes. Is the flash point of the oil to be used over 150°F. *yes (see letter 21/12/21)*

Have the requirements of Section 49 of the Rules been complied with yes.

Is this machinery duplicate of a previous case yes. If so, state name of vessel SS. "LISCARD."

General Remarks (State quality of workmanship, opinions as to class, &c. The engines and boilers of this vessel have been constructed under special survey in accordance with the Rules & approved plans. The materials and workmanship are sound & good. The Boilers tested by hydraulic pressure, and with the engines secured on board, and tested under full working conditions & found efficient. They are respectfully submitted as being eligible in my opinion to be classed with the notation of +L.M.C.12.21 in the Register book.

Oil fuel installation tried under full working conditions & found efficient.

It is submitted that this vessel is eligible for THE RECORD. + L. M. C. - 12. 21.

Fitted for Oil Fuel, 12.21., F.P. above 150°F.

The amount of Entry Fee ...	£ 4 : 0 :	When applied for, 16/12/21.
Special ...	£ 52 : 0 :	
Donkey Boiler Fee ...	£ :	When received, 18.1.22.
Travelling Expenses (if any) £	:	

J. G. Mackillop

Engineer-Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. DEC. 30 1921

Assigned + L.M.C. 12.21
L.M.C. for oil fuel 12.21
F.P. above 150°F.



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Certificate (if required) to be sent to

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

CERTIFICATE WAITING