

REPORT ON MACHINERY.

No. 32246

Received at London Office WED NOV. 3 1920

Date of writing Report 19 When handed in at Local Office 28/10/1920 Port of Hull
 No. in Survey held at Hull Date, First Survey June 21/20 Last Survey Oct 21st 1920
 Reg. Book. on the S. T. "WHIN" (Number of Visits 27)
 Master Built at Leith By whom built Buchanan & Co Ltd Tons Gross 466 Net 192
 Engines made at Hull By whom made Jas J. Holmes & Co Ltd when made 1920
 Boilers made at Do By whom made Do No 1223 when made 1920
 Registered Horse Power Owners Threlk & Co Ltd Port belonging to Belfast
 Nom. Horse Power as per Section 28 85 Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 13"-23"-37" Length of Stroke 24" Revs. per minute 112 Dia. of Screw shaft as per rule 7 1/4" Material of screw shaft 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 - If two
 liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 32"
 Dia. of Tunnel shaft as per rule 6 1/2" Dia. of Crank shaft journals as per rule 7 9/16" Dia. of Crank pin 7 1/2" Size of Crank webs 14x18 Dia. of thrust shaft under
 collars 7 1/4" Dia. of screw 9-9" Pitch of Screw 10-1 1/2" No. of Blades 4 State whether moveable No Total surface 38 ft²
 No. of Feed pumps one Diameter of ditto 3" Stroke 14 1/2" Can one be overhauled while the other is at work -
 No. of Bilge pumps one Diameter of ditto 3" Stroke 14 1/2" Can one be overhauled while the other is at work -
 No. of Donkey Engines one Sizes of Pumps 6" 4 1/2" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 2 3 1/2" In Holds, &c. 2 2 1/2"

No. of Bilge Injections one sizes 3 1/2" Connected to condenser, or to circulating pump pump as a separate Donkey Suction fitted in Engine room & size 2 1/2" inch
 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 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 Cold water How are they protected Pump 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 - Is it fitted with a watertight door worked from -

BOILERS, &c.—(Letter for record 3.) Manufacturers of Steel J. Spencer & Co Ltd
 Total Heating Surface of Boilers 1470 ft² Is Forced Draft fitted No No. and Description of Boilers One cyl mult S. water.
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 29/9/20 No. of Certificate 3452.
 Can each boiler be worked separately - Area of fire grate in each boiler 46.2 ft² No. and Description of Safety Valves to
 each boiler 1 double spring Area of each valve 4.908" 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 3'-0" Mean dia. of boilers 13'-6" Length 10'-3" Material of shell plates Steel
 Thickness 1/2" Range of tensile strength 18/32 Tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams JRL
 g. seams TRIPS. Diameter of rivet holes in long. seams 1/8" Pitch of rivets 7/8" Lap of plates or width of butt straps 1 1/4"
 Percentages of strength of longitudinal joint rivets 86.16% Working pressure of shell by rules 185 lbs Size of manhole in shell 16 x 12"
 of compensating ring 7 x 1/8" No. and Description of Furnaces in each boiler 3 horizontal Material Steel Outside diameter 3'-5 1/4"
 Length of plain part top 3'-1 1/2" Thickness of plates bottom 3 1/2" Description of longitudinal joint Welded. No. of strengthening rings -
 Working pressure of furnace by the rules 198 lbs Combustion chamber plates: Material Steel Thickness: Sides 3/32" Back 3/32" Top 3/32" Bottom 3/32"
 of stays to ditto: Sides 9/16 x 10 Back 9/16 x 8 Top 9/16 x 10 If stays are fitted with nuts or riveted heads No Working pressure by rules 187 lbs
 Material of stays Steel. Area at smallest part 2.07" Area supported by each stay 95.5 in² Working pressure by rules 198 lbs End plates in steam space:
 Material Steel Thickness 1/8" Pitch of stays 18 x 18 How are stays secured JRL Working pressure by rules 185 lbs Material of stays Steel
 at smallest part 5.79" Area supported by each stay 324 in² Working pressure by rules 186 lbs Material of Front plates at bottom Steel
 Thickness 1/2" Material of Lower back plate Steel. Thickness 3/32" Greatest pitch of stays 15 x 9 1/2" Working pressure of plate by rules 186 lbs
 Diameter of tubes 3 1/2" Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates Steel Thickness: Front 1 1/2" Back 7/8" Mean pitch of stays 10.6"
 across wide water spaces 15" Working pressures by rules 181 lbs Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 10 1/2 x 1 1/2 Length as per rule 2-8 3/8 Distance apart 9 1/2" Number and pitch of stays in each 2 2 10"
 Working pressure by rules 268 lbs Steam dome: description of joint to shell - % of strength of joint -

Superheater. Type - Date of Approval of Plan - Tested by Hydraulic Pressure to -
 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler -
 Material of Safety Valve - Pressure to which each is adjusted - Is Easing Gear fitted -

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Two top end, two bottom end, two main bearing & are set coupling bolts & nuts, one set air, feed & bilge pump valves, one main & one donkey check valve & set, two donkey pump valves, 6 pin & ring studs & nuts, one safety valve spring, a quantity of cracked bolts & nuts & iron of various sizes.

The foregoing is a correct description,
FOR CHARLES D. HOLMES & Co. LTD.

Manufacturer.

Dates of Survey while building	During progress of work in shops - -	19 20: - June 21. 24. July 23. 20-22. Aug 3. 11. 12. Sept 4. 9. 10. 19. 14. 15. 17. 20. 21. 23
	During erection on board vessel - -	24. 27. 28. 29. Oct 12. 13. 14. 21.
	Total No. of visits	29.
		Is the approved plan of main boiler forwarded herewith <i>sent</i>

Is the approved plan of main boiler forwarded herewith

donkey "

Dates of Examination of principal parts—Cylinders 14/9/20 Slides 14/9/20 Covers 14/9/20 Pistons 14/9/20 Rods 12/8/20
Connecting rods 12/8/20 Crank shaft 4/9/20 Thrust shaft 14/9/20 Tunnel shafts ✓ Screw shaft 29/8/20 Propeller 24/8/20
Stern tube 24/8/20 Steam pipes tested 14/10/20 Engine and boiler seatings 13/8/20 Engines holding down bolts 13/10/20
Completion of pumping arrangements 21/10/20 Boilers fixed 21/10/20 Engines tried under steam 21/10/20
Completion of fitting sea connections 5/7/20 Stern tube 5/7/20 Screw shaft and propeller 5/7/20
Main boiler safety valves adjusted 21/10/20 Thickness of adjusting washers $P \frac{3}{8}$ " $S \frac{5}{8}$ "
Material of Crank shaft Steel Identification Mark on Do. 2494 Material of Thrust shaft Steel Identification Mark on Do. 2499
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Steel Identification Marks on Do. 2476
Material of Steam Pipes Bolches. Test pressure 400 lbs. sq. in.

Is an installation fitted for burning oil fuel

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. T. WESTON*

General Remarks (State quality of workmanship, opinions as to class, &c. The engines & boiler of this vessel have been built under special survey & the materials & workmanship are good. On completion the machinery was tried

On completion the machinery was tried under full working conditions while moved to the Quay Wall with satisfactory results. The machinery throughout is now in a good

The machinery throughout is now in a good & efficient condition & eligible in my opinion to have the record # LMC-10-20 marked in Red in the Society's Register Book.

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 10. 20

The amount of Entry Fee	...	£	1-0-0	} When applied for, 2/11/20	
Special	...	£	12-15-0		
Donkey Boiler Fee	...	£	:	:	} When received, 30-11-20
Travelling Expenses (if any)	£	:	:	:	

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

TUE NOV. 4 9 1920

+ Lm 6. 10. 20

CERTIFICATE WRITTEN

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Lloyd's Register
Foundation