

# REPORT ON MACHINERY.

No. 35744

-6 JAN 1925

Received at London Office

Date of writing Report *best 22 1924* When handed in at Local Office *2/1/25* Port of *HULL*

No. in Survey held at *Hull* Date, First Survey *16/8/24* Last Survey *best 22 1924*

Reg. Book. on the *S. Trawler "LORD INCHCAPE"* (Number of Visits *17*)

Master *Selby* Built at *Selby* By whom built *Cochrane & Sons Ltd* Tons *Gross 338*

Engines made at *Hull* By whom made *C. Holmes & Co Ltd* when made *1924* Tons *Net 137*

Boilers made at *Hull* By whom made *C. Holmes & Co Ltd* when made *1924* When built *1924*

Registered Horse Power *96* Owners *Dickinson & Alderman S.T.C. Ltd* Port belonging to *Hull*

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 *13-23-34* Length of Stroke *26* Revs. per minute *110* Dia. of Screw shaft *as per rule 4.95* 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 *Yes*

Is 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 *36"*

Dia. of Tunnel shaft *as per rule 4.04* Dia. of Crank shaft journals *as per rule 7.36-7.39* Dia. of Crank pin *7 1/2* Size of Crank webs *4 1/2 x 4 1/2* Dia. of thrust shaft under collars *4 1/2* Dia. of screw *9'-9"* Pitch of Screw *11'-0"* No. of Blades *4* State whether moccable *no* Total surface *34 sq. ft.*

No. of Feed pumps *one* Diameter of ditto *2 7/8* Stroke *14 3/4* Can one be overhauled while the other is at work *Yes*

No. of Bilge pumps *one* Diameter of ditto *2 7/8* Stroke *14 3/4* Can one be overhauled while the other is at work *Yes*

No. of Donkey Engines *one* Sizes of Pumps *6 x 4 1/2 x 6, and 1 Ejector.* No. and size of Suctions connected to both Bilge and Donkey pumps *In Engine Room 2 @ 2" 1 @ 3" (Ejector)* In Holds, &c. *1 @ 2" Each Compartment.*

No. of Bilge Injections *one* sizes *3 1/2* Connected to condenser, or to circulating pump *CP.* Is a separate Donkey Suction fitted in Engine room & size *Yes 3"*

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 *Forward Suctions.* How are they protected *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*

Is the Screw Shaft Tunnel watertight *no* Is it fitted with a watertight door *Yes* worked from *Yes*

OILERS, &c.—(Letter for record *S.*) Manufacturers of Steel *Rheinische Stahlwerke Dusseldorf.*

Total Heating Surface of Boilers *1698 sq. ft.* Is Forced Draft fitted *no* No. and Description of Boilers *one Single ended.*

Working Pressure *200 lbs* Tested by hydraulic pressure to *350 lbs* Date of test *14.11.24* No. of Certificate *3541.*

Can each boiler be worked separately *Yes* Area of fire grate in each boiler *49.2 sq. ft.* No. and Description of Safety Valves to each boiler *1 Spring loaded* Area of each valve *49 sq. in.* Pressure to which they are adjusted *200 lbs* Are they fitted with easing gear *Yes*

Smallest distance between boilers or uptakes and bunkers or woodwork *24"* Mean dia. of boilers *14'-0"* Length *10'-8"* Material of shell plates *Steel*

Thickness *1 1/32* Range of tensile strength *28/32 Tons.* Are the shell plates welded or flanged *Yes* Descrip. of riveting: cir. seams *BR.*

Long. seams *TR. 5/8"* Diameter of rivet holes in long. seams *1 1/32* Pitch of rivets *8 3/16* Lap of plates or width of butt straps *18 13/16"*

Per centages of strength of longitudinal joint rivets *90.8* Working pressure of shell by rules *201* Size of manhole in shell *16" x 12"*

Size of compensating ring *34 x 27 x 1 1/32* No. and Description of Furnaces in each boiler *3 Plain* Material *Steel* Outside diameter *41"*

Length of plain part *top 76" bottom 69"* Thickness of plates *top 13" bottom 7/16"* Description of longitudinal joint *Welded* No. of strengthening rings *Yes*

Working pressure of furnace by the rules *219* Combustion chamber plates: Material *Steel* Thickness: Sides *3/4"* Back *23/32"* Top *3/4"* Bottom *3/4"*

Pitch of stays to ditto: Sides *9 x 8 3/4"* Back *9 x 8 3/2"* Top *9 x 8 3/4"* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *230.*

Material of stays *Steel* Area at smallest part *2.04 sq. in.* Area supported by each stay *78 3/4"* Working pressure by rules *230.* End plates in steam space: Material *Steel* Thickness *1 1/16"* Pitch of stays *18"* How are stays secured *ON + W.* Working pressure by rules *220* Material of stays *Steel*

Area at smallest part *7.5 sq. in.* Area supported by each stay *324* Working pressure by rules *275* Material of Front plates at bottom *Steel*

Thickness *1 5/16"* Material of Lower back plate *Steel* Thickness *29/32"* Greatest pitch of stays *14 x 8 3/4"* Working pressure of plate by rules *228*

Diameter of tubes *3 1/2"* Pitch of tubes *47 1/8"* Material of tube plates *Steel* Thickness: Front *15/16"* Back *7/8"* Mean pitch of stays *9 3/4"*

Pitch across wide water spaces *13 3/4"* Working pressures by rules *212* Girders to Chamber tops: Material *Steel* Depth and thickness of girder at centre *10 1/2 x 13 1/4"* Length as per rule *36 1/32"* Distance apart *9"* Number and pitch of stays in each *3 @ 8 3/4"*

Working pressure by rules *210* Steam dome: description of joint to shell *Yes* % of strength of joint *Yes*

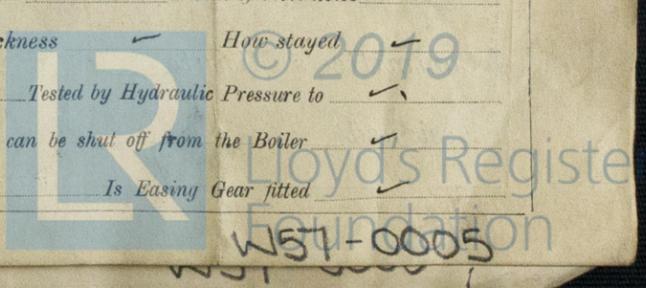
Diameter *Yes* Thickness of shell plates *Yes* Material *Yes* Description of longitudinal joint *Yes* Diam. of rivet holes *Yes*

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

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

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

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



IS A DONKEY BOILER FITTED?

Yes

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied: - 2 Top end bolts + nuts. 2 Bottom end bolts + nuts. 2 main bearing bolts + nuts. Set of coupling bolts + nuts. Valves for air feed and donkey pumps. Main + donkey check valves. Safety valve spring. Impeller + spindle for circulating pump. One feed pump ca

The foregoing is a correct description,

FOR CHARLES C. HOLMES & Co. LTD

*J. Cooper*

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } 1924: - Aug 18, 25. Sep. 25. Oct 22, 30, Nov 4, 12, 13, 17, 24, 27 Dec 4, 8, 11. { During erection on board vessel --- } 22. Total No. of visits 17

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts - Cylinders 24.11.24 Slides 30.10.24 Covers 24.11.24 Pistons 30.10.24. Rods 24.11.24 Connecting rods 24.11.24 Crank shaft 27.11.24 Thrust shaft 13.11.24. Tunnel shafts ✓ Screw shaft 18.8.24 Propeller 18.8.24 Stern tube 18.8.24. Steam pipes tested 13.12.24. Engine and boiler seatings 8/12/24. Engines holding down bolts 11/12/24 Completion of pumping arrangements 22.12.24. Boilers fixed 8/12/24. Engines tried under steam 22.12.24. Completion of fitting sea connections 25.8.24. Stern tube 25.8.24. Screw shaft and propeller 25.8.24. Main boiler safety valves adjusted 18.12.24. Thickness of adjusting washers 5/16 F. 3/8 A.

Material of Crank shaft Steel Identification Mark on Do. 122 J.H.M. Material of Thrust shaft Steel Identification Mark on Do. 122 J.H.

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Steel Identification Marks on Do. 122 J.H.

Material of Steam Pipes S.D. Copper, 4" Bore + 6lbs. ✓ Test pressure 400 lbs per sq. in. ✓

Is an installation fitted for burning oil fuel Yes ✓ 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 "Lord Chelmsford"

General Remarks (State quality of workmanship, opinions as to class, &c. The engines + boiler of this vessel have been built under special survey + in accordance with the approved plans + the Society's Rules. They have been satisfactorily fitted on board, tried under working conditions found good. Safety valves adjusted + pumping arrangements found in order. The machinery is eligible in my opinion have record of + L.M.C 12.24 - C.L.

Approved plan of boiler sent with No. 1274 - H. "Albite". Now returned

It is submitted that this vessel is eligible for THE RECORD. + LMC 12.24. CL.

The amount of Entry Fee ... £ 2 : : When applied for, 2/11/25 Special ... £ 24 : 0 : : Donkey Boiler Fee ... £ : : Travelling Expenses (if any) £ : : When received, 25

*J.W.D.* 6/1/25 *A.R.R.*  
*John Mackway*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 9 JAN 1925

Assigned

+ L.M.C. 12.24

C.L.



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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.