

## REPORT ON MACHINERY

No. 29268

Received at London Office

WED. 26. APR. 1916

of writing Report

19

When handed in at Local Office

8-4-10 16 Port of Hull

in Survey held at Hull

Date, First Survey 12/7/15

Last Survey 12-4-1916

Book. 23 on the steel screw trawler "Ford Reading"

(Number of Visits 57)

ter

Built at Lelby

By whom built Cochrane &amp; Sons Ltd

Gross 326

Net 134

When built 1916-4

ines made at Hull

By whom made C.D. Holmes &amp; Co. Ltd (Hull)

when made 1916-4

ers made at Hull

By whom made C.D. Holmes &amp; Co. Ltd

when made 1916-4

istered Horse Power

Owners Pickering &amp; Halliday's Steam Trawling Co. Ltd belonging to Hull

Horse Power as per Section 28 88

Is Refrigerating Machinery fitted for cargo purposes no

Is Electric Light fitted yes

INES, &amp;c.—Description of Engines Triple expansion

No. of Cylinders Three

No. of Cranks 3

of Cylinders 13"-23"-37"

Length of Stroke 26"

Revs. per minute

Dia. of Screw shaft

as per rule 7.88"

Material of screw shaft

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

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

on the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

If two

s are fitted, is the shaft lapped or protected between the liners

Length of stern bush 35 1/2"

of Tunnel shaft

as per rule 7.04"

Dia. of Crank shaft journals

as per rule 7.39"

Dia. of Crank pin 7 1/2"

Size of Crank webs 14 1/2" x 4 1/2"

Dia. of thrust shaft under

s 7 1/2"

Dia. of screw 9-7 1/2"

Pitch of Screw 11-0"

No. of Blades 4

State whether moveable no

Total surface 33 sq ft

of Feed pumps one

Diameter of ditto 2 5/8"

Stroke 14 3/4"

Can one be overhauled while the other is at work

of Bilge pumps one

Diameter of ditto 2 5/8"

Stroke 14 3/4"

Can one be overhauled while the other is at work

of Donkey Engines one 3" ejector

Sizes of Pumps 6" 4 1/2" x 6" duplex

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

Engine Room Two 2' dia

In Holds, &amp;c. one 2' dia in each compartment

all suction also connected to ejector

of Bilge Injections one

size 3 1/2"

Connected to condenser, or to circulating pump pumps

Is a separate Donkey Suction fitted in Engine room &amp; size 3" ejector

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 none

all connections with the sea direct on the skin of the ship yes

Are they Valves or Cocks both

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

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

pipes are carried through the bunkers Forward sections

How are they protected wooden casings

all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes

the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes

of examination of completion of fitting of Sea Connections 7-10-15

of Stern Tube 7-10-15

Screw shaft and Propeller 7-10-15

Screw Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

ERS, &amp;c.—(Letter for record S)

Manufacturers of Steel

Stewarts &amp; Lloyds

Heating Surface of Boilers 1440

Is Forced Draft fitted no

No. and Description of Boilers one single ended

ing Pressure 200 lbs

Tested by hydraulic pressure to 400

Date of test 31-12-15

No. of Certificate 3126

each boiler be worked separately

Area of fire grate in each boiler 48 sq ft

No. and Description of Safety Valves to

boiler two spring loaded

Area of each valve 4.9 sq"

Pressure to which they are adjusted 205

Are they fitted with easing gear yes

st distance between boilers or uptakes and bunkers on woodwork 7"

Mean dia. of boilers 165"

Length 10'-6"

Material of shell plates steel

ess 1/564

Range of tensile strength 28-32 tons

Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams double

seams 7/8 B.S.

Diameter of rivet holes in long. seams 1 1/32

Pitch of rivets 8 1/8"

Lap of plates or width of butt straps 18"

ntages of strength of longitudinal joint

rivets 87

plate 85

Working pressure of shell by rules 201

Size of manhole in shell 12" x 16"

compensating ring 7" x 1 1/564

No. and Description of Furnaces in each boiler 3 Plain

Material steel

Outside diameter 40"

of plain part

top 7 1/2"

Thickness of plates

crown 13/16"

Description of longitudinal joint welded

No. of strengthening rings

ing pressure of furnace by the rules 206

Combustion chamber plates: Material steel

Thickness: Sides 3/4"

Back 23/32"

Top 3/4"

Bottom 3/4"

of stays to ditto: Sides 10" x 8"

Back 9 3/4" x 8 3/4"

Top 11" x 8"

If stays are fitted with nuts or riveted heads nuts

Working pressure by rules 208

ial of stays steel

Diameter at smallest part 2 1/4"

Area supported by each stay 88 sq"

Working pressure by rules 211

End plates in steam space

ial steel

Thickness 1 1/32"

Pitch of stays 19" x 17 5/8"

How are stays secured 8 x 8 w

Working pressure by rules 210

Material of stays steel

er at smallest part 7 5/8"

Area supported by each stay 335 sq"

Working pressure by rules 233

Material of Front plates at bottom steel

ess 15/16"

Material of Lower back plate steel

Thickness 15/16"

Greatest pitch of stays 13 3/4" x 9 9/16"

Working pressure of plate by rules 216

er of tubes 3 1/2"

Pitch of tubes 4 7/8"

Material of tube plates steel

Thickness: Front 15/16" + 3/4" double

Back 7/8"

Mean pitch of stays 10"

across wide water spaces 14"

Working pressures by rules 275-44

Girders to Chamber tops: Material steel

Depth and

ss. of girder at centre 11" x 1 3/4"

Length as per rule 36.218

Distance apart 11"

Number and pitch of stays in each Three 8"

ing pressure by rules 200

Superheater or Steam chest; how connected to boiler

Can the superheater be shut off and the boiler worked

ly

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

lined with rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

ing pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

Lloyd's Register

Foundation



IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:— *Two top end bolts & nuts, two bottom end bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set of air feed valve pump valves, two valves for donkey pump, one set of valves & nuts for check valves, one impeller shaft, one safety valve spring, top & bottom end bolts for circulating pump & a quantity of bolts & nuts & nuts of various sizes*

The foregoing is a correct description,

*P. pro* CHARLES D. HOLMES & CO. LTD.

*Arthur Holmes*

DIRECTOR

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } 1915:— *Jul 12, 20, 23, 28, Aug 10, 16, 19, 25, 29, Sep 4, 7, 10, 14, 20, 30, Oct 1, 5, 6, 7, 16*  
{ During erection on board vessel - - } *Nov 2, 5, 9, 11, Dec 6, 8, 11, 15, 16, 17, 20, 22, 30, 31, 1916:— Jan 18, 25, 28, 31, Feb 3, 7, 10, 14, 17, 18*  
Total No. of visits *57*

Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders *31-1-16* Slides *25-2-16* Covers *7-2-16* Pistons *22-2-16* Rods *25-2-16*  
Connecting rods *25-2-16* Crank shaft *18-2-16* Thrust shaft *25-2-16* Tunnel shafts *✓* Screw shaft *6-10-16* Propeller *6-10-16*  
Stern tube *5-10-16* Steam pipes tested *31-3-16* Engine and boiler seatings *7-10-16* Engines holding down bolts *15-8-16*  
Completion of pumping arrangements *8-4-16* Boilers fixed *1-4-16* Engines tried under steam *8-4-16*  
Main boiler safety valves adjusted *1-4-16* Thickness of adjusting washers *7 1/32 to 7/16*  
Material of Crank shaft *Iron* Identification Mark on Do. *1564 FLS* Material of Thrust shaft *Iron* Identification Mark on Do. *73887JF*  
Material of Tunnel shafts *✓* Identification Marks on Do. *✓* Material of Screw shafts *Iron* Identification Marks on Do. *1520 FLS*  
Material of Steam Pipes *solid drawn copper* Test pressure *40 lbs.*  
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 *Lord Murray*

### General Remarks

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

*The machinery of this vessel has been constructed under special survey in accordance with the approved plans & the rules of this Society, the materials & workmanship are good. The machinery has been properly fitted & secured on board the vessel & on completion tested under steam under full working conditions & found satisfactory. The safety valves have been adjusted under steam & tested for accumulation which did not exceed 2 1/4 lbs.*

*In my opinion the vessel is eligible for the record + L.M.C. 4.16.*

It is submitted that  
this vessel is eligible for  
THE RECORD + L.M.C. 4.16

The amount of Entry Fee ... £ 1 : 0 :  
Special ... £ 13 : 4 :  
Donkey Boiler Fee ... £  
Travelling Expenses (if any) £

When applied for,

*25/4/16*

When received,

*28/4/16*

*Frank A. Lurgan*  
Engineer-Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute

*FRI. APR. 28. 1916*

Assigned

*+ L.M.C. 4.16*



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