

## REPORT ON MACHINERY

No. 29280

Received at London Office FRI. - 5 MAY. 1916

Date of writing Report 22-4-16 When handed in at Local Office 22-4-16 Port of Hull

No. in Survey held at Hull Date, First Survey 7-7-15 Last Survey 20-4-16 19

Reg. Book. Lupt 23 on the Steel screw trawler Tesostis (Number of Visits 45)

Master Built at Beverley By whom built Cook, Wilton &amp; Gemmell Tons { Gross 293 Net 123 When built 1916-4

Engines made at Hull By whom made C. D. Holmes &amp; Co. Ltd (701118) when made 1916-4

Boilers made at Hull By whom made C. D. Holmes &amp; Co. Ltd when made 1916-4

Registered Horse Power Owners Roberts &amp; Ruckman Ltd Port belonging to Grimsby

Nom. Horse Power as per Section 28 89 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

## ENGINES, &amp;c.—Description of Engines Triple expansion No. of Cylinders Three No. of Cranks 3

Dia. of Cylinders 13"-23"-37" Length of Stroke 24" Revs. per minute 7.62" Material of screw shaft as fitted 7 3/4" screw shaft

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 35 1/2"

Dia. of Tunnel shaft as per rule 6.85" Dia. of Crank shaft journals as per rule 7.19" Dia. of Crank pin 7 3/8" Size of Crank webs 14 1/2" Dia. of thrust shaft under

collars 7 3/8" Dia. of screw 9-3" Pitch of Screw 11-0" No. of Blades 4 State whether moveable no Total surface 334 ft

No. of Feed pumps one Diameter of ditto 2 1/4" Stroke 24" Can one be overhauled while the other is at work 67 SHP

No. of Bilge pumps one Diameter of ditto 2 1/4" Stroke 24" Can one be overhauled while the other is at work

No. of Donkey Engines one 2 1/2 yds Sizes of Pumps 6" 3 1/2" x 6" 7/8" wheel No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room two 2" dia In Holds, &amp;c. One 2" dia in each compartment

all suction also connected to water

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

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 none

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 suction How are they protected strong wooden 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 7-7-15 of Stern Tube 7-7-15 Screw shaft and Propeller 12-7-15

Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

## BOILERS, &amp;c.—(Letter for record 5) Manufacturers of Steel D. Colville &amp; Sons

Total Heating Surface of Boilers 1520 ft Is Forced Draft fitted no No. and Description of Boilers one single ended

Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 25-2-16 No. of Certificate 3129

Can each boiler be worked separately Area of fire grate in each boiler 48.24 ft No. and Description of Safety Valves to

each boiler two spring loaded Area of each valve 4.9" Pressure to which they are adjusted 200 lbs Are they fitted with easing gear yes

Smallest distance between boilers on upper and bunkers on woodwork 6" Mean dia. of boilers 162 1/32" Length 10-9" Material of shell plates steel

Thickness 1 1/16" Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double

long. seams J.P.B. Diameter of rivet holes in long. seams 1 1/32" Pitch of rivets 8 1/16" Lap of plates or width of butt straps 17 1/8"

Per centages of strength of longitudinal joint rivets 87.4 plate 84.8 Working pressure of shell by rules 204 Size of manhole in shell 16" x 12"

Size of compensating ring 7" x 1 1/4" No. and Description of Furnaces in each boiler three plain Material steel Outside diameter 40"

Length of plain part top 80 1/2" bottom 74 1/2" Thickness of plates crown 7 13/16" bottom 7 1/16" Description of longitudinal joint welded No. of strengthening rings one ft

Working pressure of furnace by the rules 204 Combustion chamber plates: Material steel Thickness: Sides 1 1/16" Back 1 1/16" Top 3/4" Bottom 1 1/16"

Pitch of stays to ditto: Sides 9 1/2" x 8" Back 9 1/2" x 8 1/4" Top 11" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 207

Material of stays steel Diameter at smallest part 2.4" Area supported by each stay 106" Working pressure by rules 204 End plates in steam space:

Material steel Thickness 1 3/16" Pitch of stays 18" x 18" How are stays secured 2 1/2" x 1/4" Working pressure by rules 206 Material of stays steel

Diameter at smallest part 6.33" Area supported by each stay 324" Working pressure by rules 203 Material of Front plates at bottom steel

Thickness 1" Material of Lower back plate steel Thickness 1 5/16" Greatest pitch of stays 14" x 9 1/2" Working pressure of plate by rules 212

Diameter of tubes 3 1/2" Pitch of tubes 5" x 5" Material of tube plates steel Thickness: Front 1" Back 7/8" Mean pitch of stays 11 1/4"

Pitch across wide water spaces 13 3/4" Working pressures by rules 203 Girders to Chamber tops: Material steel Depth and

thickness of girder at centre 1 1/4" x 1 1/4" Length as per rule 37" Distance apart 11" Number and pitch of stays in each three 8"

Working pressure by rules 210 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

Lloyd's Register

F01223-0048



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, bilge & circulating pump valves, one main & one donkey chuck valve, two donkey pump valves, 12 piston studs & nuts, two safety valve springs one set of escape valve springs.*

The foregoing is a correct description,

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

*Harold J. Shuarden* DIRECTOR

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } *1915:— Jul. 7. 10. 12. Oct 8. 12. Nov 2. 9. 12. 16 Dec 6. 8. 15. 17. 22. 30. 1916:— Jan 5. 10. 13.*  
{ During erection on board vessel -- } *18. 20. 25. 31 Feb 3. 4. 7. 8. 10. 11. 14. 17. 22. 24. 25. 29 Mar 3. 8. 10. 16. 30 Apr 6. 10. 11. 13. 17. 20.*  
Total No. of visits *45*

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

Dates of Examination of principal parts—Cylinders *7-2-16* Slides *10-3-16* Covers *29-2-16* Pistons *3-3-16* Rods *8-3-16*

Connecting rods *8-3-16* Crank shaft *29-2-16* Thrust shaft *16-3-16* Tunnel shafts *✓* Screw shaft *12-7-15* Propeller *12-7-15*

Stern tube *7-7-15* Steam pipes tested *11-4-16* Engine and boiler seatings *7-7-15* Engines holding down bolts *6-4-16*

Completion of pumping arrangements *20-4-16* Boilers fixed *13-4-16* Engines tried under steam *20-4-16*

Main boiler safety valves adjusted *13-4-16* Thickness of adjusting washers *7/32 & 1/32*

Material of Crank shaft *Iron* Identification Mark on Do. *1566 FLS* Material of Thrust shaft *Iron* Identification Mark on Do. *7266 & 24*

Material of Tunnel shafts *✓* Identification Marks on Do. *✓* Material of Screw shafts *Iron* Identification Marks on Do. *503 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 *no* If so, state name of vessel *✓*

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 was tried under steam under full working conditions & found satisfactory. The safety valves have been adjusted under steam & tested for accumulation which did not exceed 205 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 ... £ *3* : *7* :  
Donkey Boiler Fee ... £  
Travelling Expenses (if any) :£ *2* :  
When applied for, *4-5-1916*  
When received, *31-5-1916*

Committee's Minute *TUE. MAY -9. 1916*

Assigned

*+ L.M.C. 4.16*

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

MACHINERY CERTIFICATE  
WRITTEN



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Foundation