

## REPORT ON MACHINERY.

No. 30146

Received at London Office

FRI. 21 SEP 1917

Date of writing Report 18-9-17 19 When handed in at Local Office 19-9-17 19 Port of Hull

Survey held at Hull Date, First Survey Nov 18/16 Last Survey 12-9-17 19

Book. 99 on the steel screw trawler Fenosta (Number of Visits 32)

Master Built at Selby By whom built Cochrane & Sons Ltd Tons { Gross 316 Net 127

Engines made at Hull By whom made C. D. Holmes & Co Ltd (1135) when made 1917-9

Motors made at Hull By whom made C. D. Holmes & Co Ltd when made 1917-9

Registered Horse Power Owners Little Bros Tugos Port belonging to Grimsby

Net Horse Power as per Section 28 84 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

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

No. of Cylinders 13"-23"-37" Length of Stroke 24" Revs. per minute 110 Dia. of Screw shaft as per rule 7.64" Material of screw shaft as fitted 7.34" (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

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 If two

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 6.84" Dia. of Crank shaft journals as per rule 7.19" Dia. of Crank pin 7 3/8" Size of Crank webs 4 3/8" x 10 3/4" Dia. of thrust shaft under

bars 7 3/8" Dia. of screw 9'-3" Pitch of Screw 11'-4 1/2" No. of Blades 4 State whether moveable no Total surface 32 ft

No. of Feed pumps one Diameter of ditto 2 3/4" Stroke 14 1/4" Can one be overhauled while the other is at work

No. of Bilge pumps one Diameter of ditto 2 3/4" Stroke 14 1/4" Can one be overhauled while the other is at work

No. of Donkey Engines one 2 1/2" extra Sizes of Pumps 6", 4 1/4" x 6" dup No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room Two 2" dia In Holds, &c. one 2" dia in each compartment

all suction also connected to extra

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

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 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 floor worked from

MILERS, &c.—(Letter for record S) Manufacturers of Steel Stewarts & Lloyd

Total Heating Surface of Boilers 1400 Is Forced Draft fitted no No. and Description of Boilers one single ended

Working Pressure 200 Tested by hydraulic pressure to 400 Date of test 2-8-17 No. of Certificate 3227

Can each boiler be worked separately Area of fire grate in each boiler 46.8 ft No. and Description of Safety Valves to

each boiler Two spring loaded Area of each valve 4.9 sq ft Pressure to which they are adjusted 205 Are they fitted with easing gear yes

Smallest distance between boilers on uptakes and bunkers or on lower deck 8 1/2 ft lagged dia. of boilers 16 1/2" Length 10'-6" Material of shell plates steel

Thickness 1 1/4" Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double

Long. seams 7 R D B S Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 1/2" Lap of plates or width of butt straps 17 1/2"

Percentage of strength of longitudinal joint rivets 86.1 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 39"

Length of plain part top 77 1/2" Thickness of plates crown 5 1/4" Description of longitudinal joint welded No. of strengthening rings one ft

bottom 75" Working pressure of furnace by the rules 207 Combustion chamber plates: Material steel Thickness: Sides 1 1/8" Back 1 1/8" Top 1 1/8" Bottom 1 1/8"

Pitch of stays to ditto: Sides 10" x 8" Back 9 1/4" x 8 1/2" Top 9" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 207

Material of stays steel Area at smallest part 2.4 sq ft Area supported by each stay 104 sq ft Working pressure by rules 207 End plates in steam space:

Material steel Thickness 1 3/32" Pitch of stays 19 1/2" x 17" How are stays secured 8 x 16 Working pressure by rules 210 Material of stays steel

Area at smallest part 7.5 sq ft Area supported by each stay 331 sq ft Working pressure by rules 235 Material of Front plates at bottom steel

Thickness 29/32" Material of Lower back plate steel Thickness 29/32" Greatest pitch of stays 14" x 9" Working pressure of plate by rules 205

Diameter of tubes 3 1/2" Pitch of tubes 5 1/2" x 5" Material of tube plates steel Thickness: Front 29/32" Back 7/8" Mean pitch of stays 10 1/8"

Pitch across wide water spaces 14 1/4" Working pressures by rules 261 Girders to Chamber tops: Material steel Depth and

Thickness of girder at centre 10 1/4" x 1 3/4" Length as per rule 36.4" Distance apart 9" Number and pitch of stays in each Three 8"

Working pressure by rules 210 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

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 bolts & nuts, two bottom end bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one main & one donkey check valve, one set of air, fuel & bilge pump valves, 6 junk ring studs & nuts, two safety valve springs, one set of escape valve springs, two donkey pump valves, 3 condenser tubes,  $\frac{1}{2}$  set of fire bars, & a quantity of bolts & nuts & iron of various sizes.

The foregoing is a correct description,

for CHARLES D. HOLMES & CO. LTD.

*Charles D. Holmes*

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1916 - Jan 18, 22, 24, 1917 - Apr 3, 23, 26, May 14, 15, 23, 29, Jun 9, 11, 14, Jul 2, 6, 10, 13, 18, 21, 24, 25, 27  
During erection on board vessel - - 31 Aug 2, 20, 24, 30, Sept 3, 5, 12  
Total No. of visits 32

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

" " " donkey " " " *yes*

Dates of Examination of principal parts—Cylinders 9-6-17 Slides 6-7-17 Covers 6-7-17 Pistons 6-7-17 Rods 6-7-17  
Connecting rods 2-7-17 Crank shaft 2-7-17 Thrust shaft 3-4-17 Tunnel shafts *✓* Screw shaft 24-11-16 Propeller 24-11-16  
Stern tube 18-11-16 Steam pipes tested 3-9-17 Engine and boiler seatings 24-11-16 Engines holding down bolts 30-8-17  
Completion of pumping arrangements 12-9-17 Boilers fixed 5-9-17 Engines tried under steam 5-9-17  
Completion of fitting sea connections 24-11-16 Stern tube 24-11-16 Screw shaft and propeller 24-11-16  
Main boiler safety valves adjusted 5-9-17 Thickness of adjusting washers  $7\frac{3}{4}$  &  $2\frac{1}{32}$

Material of Crank shaft *Iron* Identification Mark on Do. 1788 FLS Material of Thrust shaft *Iron* Identification Mark on Do. 308 22.4

Material of Tunnel shafts *✓* Identification Marks on Do. *✓* Material of Screw shafts *Iron* Identification Marks on Do. 1756 FLS

Material of Steam Pipes *Solid drawn copper* Test pressure *400 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 *Parabera*

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 Boiler & steam pipes have been tested as above by hydraulic pressure & found sound & good. The machinery has been properly fitted & secured on board the vessel & on completion tried under steam & found satisfactory. The safety valves have been tested for accumulation which did not exceed 210 lbs. In my opinion the vessel is eligible for the record & L.M.C. 9-17*

It is submitted that  
this vessel is eligible for  
THE RECORD. + L.M.C. 9.17.

The amount of Entry Fee ... £ 1 : 0 :  
Special ... £ 12 : 12 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : 8/2 :

When applied for,

20/9/17

When received,

28/9/17

*Frank A. Stanger*

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

TUE 25 SEP 1917

*L.M.C. 9.17*



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Foundation