

## REPORT ON MACHINERY.

No. 29103

Received at London Office MON. 31 JAN. 1916

Date of writing Report 14-1-16 19 When handed in at Local Office 14-1-16 Port of Hull

Date, First Survey 16-6-15 Last Survey 8-1-16 19

No. in Survey held at Hull Rep. Book. 42 Supr on the steel screw trawler Gavina (No 1098)

Master Built at Kelby By whom built Cochrane &amp; Sons Ltd Tons Gross 289 Net 115

Engines made at Hull By whom made C. D. Holmes &amp; Co Ltd when made 1916-1

Boilers made at Hull By whom made C. D. Holmes &amp; Co Ltd when made 1916-1

Registered Horse Power Owners J. Mann &amp; Son Ltd Port belonging to Fleetwood

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

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 7.64 as per rule 7.78 as fitted 7.78 Material of screw shafts Iron

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 yes 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" as fitted 7.19" Dia. of Crank pin 7 1/2" Size of Crank web 4 7/8" x 4 1/2" Dia. of thrust shaft under

collars 7 1/2" Dia. of screw 9'-3" Pitch of Screw 11'-0" No. of Blades 4 State whether moveable no Total surface 33 #

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 yes

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 yes

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

In Engine Room two 2" dia. all suction also connected to ejector In Holds, &amp;c. one 2" dia. in each compartment

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 &amp; size 2 1/2" eqn

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 15-7-15 of Stern Tube 15-7-15 Screw shaft and Propeller 15-7-15

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

BOILERS, &amp;c.—(Letter for record S) Manufacturers of Steel J. G. Dillie &amp; Sons

Total Heating Surface of Boilers 1370 # 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 13-11-15 No. of Certificate 3112

Can each boiler be worked separately Area of fire grate in each boiler 45.6 # No. and Description of Safety Valves to

each boiler two spring loaded Area of each valve 4.9 # Pressure to which they are adjusted 205 lbs. Are they fitted with easing gear yes

Smallest distance between boilers on upstokes and bunkers on downstokes 8" Mean dia. of boilers 16.2" Length 11'-0" Material of shell plates steel

Thickness 1 7/32" 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.R.B. 1 Diameter of rivet holes in long. seams 1 7/32" Pitch of rivets 8 3/8" Lap of plates or width of butt straps 16 7/8"

Per centages of strength of longitudinal joint rivets 85.4 plate 85.4 Working pressure of shell by rules 203 lbs Size of manhole in shell 16" x 12"

Size of compensating ring 7" x 1 7/32" No. and Description of Furnaces in each boiler 3 plain Material steel Outside diameter 40"

Length of plain part top 79 1/4" bottom 68" Thickness of plates crown 3 13/16" Description of longitudinal joint welded No. of strengthening rings 23 3/32"

Working pressure of furnace by the rules 205 Combustion chamber plates: Material steel Thickness: Sides 23/32" Back 23/32" Top 3/4" Bottom 23/32"

Pitch of stays to ditto: Sides 10" x 8 1/2" Back 10 1/2" x 8" Top 11" x 8 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 216 End plates in steam space:

Material of stays steel Diameter at smallest part 2.4" Area supported by each stay 100 # Working pressure by rules 200 Material of stays steel

Material steel Thickness 1 3/16" Pitch of stays 18 1/2" x 8" How are stays secured 9 x 9 # Working pressure by rules 234 Material of Front plates at bottom steel

Diameter at smallest part 7.5" Area supported by each stay 333 # Working pressure of plate by rules 207

Thickness 1 5/16" Material of Lower back plate steel Thickness 29/32" Greatest pitch of stays 14 1/2" x 8" Working pressure of plate by rules 207

Diameter of tubes 3 1/2" Pitch of tubes 5 1/2" x 5" Material of tube plates steel Thickness: Front 15/16" Back 7/8" Mean pitch of stays 10 1/2"

Pitch across wide water spaces 14" Working pressures by rules 249 Girders to Chamber tops: Material steel Depth and

thickness of girder at centre 12" x 1 3/4" Length as per rule 38 7/8" Distance apart 11" Number and pitch of stays in each three 8 1/2"

Working pressure by rules 207 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

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IS A DONKEY BOILER FITTED? *Yes*

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 pump valves, one impeller & shaft, one safety valve spring, one main & one donkey check valve & a quantity of bolts & nuts of various sizes*

The foregoing is a correct description,

P. 770 CHARLES D. HOLMES & CO. LTD.

*Arthur Holmes*

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1915: Jan 16, Feb 7, 10, 12, 14, 15, Aug 10, 13, 25, 29, Sep 4, 7, 10, 14, 15, 20, 22, 24, 27, 28, 29, 30, 1916  
During erection on board vessel -- Oct. 1, 5, 6, 8, 11, 12, 14, 16, 19, 20, 23, 25, 27, 29, Nov 2, 5, 9, 11, 12, 13, 23, 26, Dec 2, 7, 15, 21, 24, Jan 1-5  
Total No. of visits 52

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

" " " " " " " " " " " "

Dates of Examination of principal parts: Cylinders 4-9-15 Slides 19-10-15 Covers 25-10-15 Pistons 25-10-15 Rods 14-10-15

Connecting rod 29-10-15 Crank shaft 12-10-15 Thrust shaft 16-6-15 Tunnel shafts ✓ Screw shaft 14-7-15 Propeller 14-7-15

Stern tube 12-7-15 Steam pipes tested 15-12-15 Engine and boiler seatings 15-7-15 Engines holding down bolts 7-12-15

Completion of pumping arrangements 6-1-16 Boilers fixed 15-12-15 Engines tried under steam 6-1-16

Main boiler safety valves adjusted 24-12-15 Thickness of adjusting washers 5/16 inch

Material of Crank shaft *Iron* Identification Mark on Do. 1534 FLS Material of Thrust shaft *Iron* Identification Mark on Do. 7117 22

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *Iron* Identification Marks on Do. 1506 FL

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 *Jacinta* ✓

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 by hydraulic pressure as above & found good. The machinery has been properly fitted & secured on board the vessel & on completion was tried under steam & found satisfactory. The safety valves have been adjusted under steam & tested for accumulation when did not exceed 211 lb.*

*In my opinion the vessel is eligible for the record & L.R.C. 1-16.*

It is submitted that  
this vessel is eligible for  
THE RECORD & L.M.C. 1. 16.

The amount of Entry Fee ... £ 1 : 0 :

Special ... £ 12 : 12 :

Donkey Boiler Fee ... £ :

Travelling Expenses (if any) £ : 8/2 :

When applied for,

29-1-1916

When received,

17/1/16

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

Committee's Minute

TUE FEB 1-1916

Assigned

*+ L.R.C. 1-16*

MACHINERY CERTIFICATE  
WRITTEN



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