

# REPORT ON MACHINERY

Indebted No. 10182

No. 71058

MON. AUG. 19. 1918

Received at London Office

to of writing Report 24<sup>th</sup> June 1918 which dated in at Local Office 24 JUN 1918

Port of

NEWCASTLE-ON-TYNE

in Survey held at Newcastle

Date, First Survey 6<sup>th</sup> 26<sup>th</sup> 1917

Last Survey June 19<sup>th</sup> 1918

on the S.S. "Balmuccia"

Master E. H. Barry. Built at Middlesbrough

By whom built Sir Raylton Dixon & Co

Gross 6629

Net 4916

When built 1918

Engines made at Newcastle

By whom made

N. E. Marine Eng Co 2291 when made 1918

Boilers made at

By whom made

when made 1918

Registered Horse Power

Owners Furness Withy & Co Ltd

Port belonging to Liverpool

nom. Horse Power as per Section 28 716

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

GINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 29" - 49" - 80"

Length of Stroke 54"

Revs. per minute 74

Dia. of Screw shaft

as per rule 15.82" Material of Steel

the screw shaft fitted with a continuous liner the whole length of the stern tube

Is the after end of the liner made water tight

the propeller boss If the liner is in more than one length are the joints burned

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 5' - 9"

Dia. of Tunnel shaft

as per rule 14.65"

Dia. of Crank shaft journals

as per rule 15.38"

Dia. of Crank pin 16 1/4"

Size of Crank webs 25" x 10"

Dia. of thrust shaft under

rollers 15 3/8"

Dia. of screw 18' - 6"

Pitch of Screw 18' - 6"

No. of Blades 4

State whether moveable

Yes

Total surface 106 sq

No. of Feed pumps 2

Diameter of ditto 12" x 9"

Stroke 21"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps 2

Diameter of ditto 5"

Stroke 30"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines 3

Sizes of Pumps 9" x 11" x 10", 9" x 11" x 10", 8" x 6" x 8"

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

In Holds, &c.

No. 1 hold 2-3 1/2"

No. 2 hold 2-3 1/2"

No. 3 hold 2-3 1/2"

No. 4 hold 2-3 1/2"

Tunnel Well 1-3"

No. of Bilge Injections 1

size 11"

Connected to condenser, or to circulating pump

Yes

Is a separate Donkey Suction fitted in Engine room & size

2-3 1/2"

Are all the bilge suction pipes fitted with roses

Yes

Are the roses in Engine room always accessible

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 stowhold plates

Yes

Are the Discharge Pipes above or below the deep water line

Both

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

None

How are they protected

Yes

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 21-3-18

of Stern Tube 8-2-18

Screw/shaft and Propeller 16-5-18

OILERS, &c.—(Letter for record S)

Manufacturers of Steel

John Spence & Sons

Total Heating Surface of Boilers 11096 sq

Is Forced Draft fitted

Yes

No. and Description of Boilers

Four, single-ended

Working Pressure 180 lbs

Tested by hydraulic pressure to

360 lbs

Dates of tests 3-13-2-18

No. of Certificate S 3-9051

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

62 sq

No. and Description of Safety Valves to

each boiler Two, Spring

Area of each valve 9.62 sq

Pressure to which they are adjusted 185 lbs

Smallest distance between boilers of uptakes and bunkers or woodwork 16 1/2"

Mean dia. of boilers 15' - 7 5/8"

Length 12' - 2 1/2"

Material of shell plates

Steel

Thickness 1 3/8"

Range of tensile strength 29 3/4 - 34

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

8-Lap

long. seams 88 S. 7 Riv

Diameter of rivet holes in long. seams 1 7/16"

Pitch of rivets 9 3/8"

Lap of plates or width of butt straps 21 1/4"

Per centages of strength of longitudinal joint

rivets 88.8

plate 88.4

Working pressure of shell by rules 213 lbs

Size of manhole in shell 16" x 12"

Size of compensating ring 12" x 12"

No. and Description of Furnaces in each boiler

3-8ightone

Material Steel

Outside diameter 49"

Length of plain part

top 21"

Thickness of plates

bottom 32"

Description of longitudinal joint

Welded

No. of strengthening rings

Working pressure of furnace by the rules 218 lbs

Combustion chamber plates: Material Steel

Pitch of stays to ditto: Sides 10 1/2" x 9 1/2"

Back 10 1/2" x 9 1/2"

Top 10 1/2" x 9 1/2"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules 194 lbs

Material of stays Steel

Diameter at smallest part 2.03"

Area supported by each stay 99.75 sq

Working pressure by rules 183 lbs

End plates in steam space

Material Steel

Thickness 1 1/32"

Pitch of stays 24" x 22 1/2"

How are stays secured

Diameter at smallest part 11.04"

Area supported by each stay 54.0 sq

Working pressure by rules 214 lbs

Material of Front plates at bottom

Steel

Thickness 1 1/32"

Material of Lower back plate

Steel

Thickness 1 1/32"

Diameter of tubes 2 1/2"

Pitch of tubes 3 3/4" x 3 3/4"

Material of tube plates

Steel

Thickness: Front 1 1/32"

Back 1 1/16"

Mean pitch of stays 7 1/2"

Pitch across wide water spaces 14 1/2"

Working pressures by rules 194 lbs

Girders to Chamber tops: Material Steel

Depth and

thickness of girder at centre 9 1/2" x 2"

Length as per rule 36"

Distance apart 10 1/2"

Number and pitch of stays in each 3-9 1/2"

Working pressure by rules 182 lbs

Superheater or Steam chest; how connected to boiler

None

Can the superheater be shut off and the boiler worked

separately

Diameter

Length

Thickness of shell plates

Material

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

Yes

W500-0319



IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied: Two top end, two bottom end & two main bearing bolts & nuts, a set of coupling bolts, a set of feed & bilge pump valves, a quantity of assorted bolts & nuts, two propeller blades, a screw shaft, a pair of top end brasses, an air pump rod & headvalve, rings & springs for each piston, an impeller shaft for circulating pump.

The foregoing is a correct description,

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD.

J. J. Harrison

Manufacturer.

Dates of Survey while building: During progress of work in shops - 1917. Oct 26, 30, Nov 6, 8, 13, 15, 16, 19, 21, 23, 27, 28, 29, 30. DEC 5, 10, 13, 14, 18, 20, 27. 1918. Jan 3, 7, 8, 10, 11, 14, 15, 18, 21, 22, 23. During erection on board vessel - 24, 25, 29, 30, 31. Feb 1, 6, 12, 13, 14, 20, 26, 27. MAR. 5, 7, 12, 13, 15, 18, 20, 26. APR. 3, 4, 9. MAY 13, 16, 17, 21, 23. JUN 10, 12, 19. Total No. of visits 66. At Mill: 1918. Feb 8, 15, 21. MAR 4. May 2, June 26, July 5, 10, 16, 18, 19. Is the approved plan of main boiler forwarded herewith? Yes.

Dates of Examination of principal parts: Cylinders 20-12-17. Slides 9-4-18. Covers 8-1-18. Pistons 9-1-18. Rods 11-1-18. Connecting rods 11-1-18. Crank shaft 21-1-18. Thrust shaft 28-11-17. Tunnel shafts 29-1-18. Screw shaft 21-1-18. Propeller 5-3-18. Stern tube 12-12-17. Steam pipes tested 16-2-18. Engine and boiler seatings 16-5-18. Engines holding down bolts 18-6-18. Completion of pumping arrangements 19-6-18. Boilers fixed 18-6-18. Engines tried under steam 19-6-18. Main boiler safety valves adjusted 19-6-18. Thickness of adjusting washers PFB. F52 A7. SEB. F72 A7. PAB. F72 A7. SAB. F72 A7. Material of Crank shaft Steel. Identification Mark on Do. 28-1-18. Material of Thrust shaft Steel. Identification Mark on Do. 28-11-17. Material of Tunnel shafts Steel. Identification Marks on Do. 28-1-18. Material of Screw shafts Steel. Identification Marks on Do. 28-1-18. Material of Steam Pipes Iron. Test pressure 540 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? Yes.

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 engines & boilers of this vessel have been constructed under special survey & the materials and workmanship are found to be good. The engines have been tried under steam and the boiler safety valves adjusted at the working pressure. The machinery is now in good & safe working condition & eligible in my opinion to have the notation of + LMC 6-18.

To complete the survey the tunnel is to be made watertight & the electric installation to be fitted at Middlesbrough.

The vessel has been fitted for carrying oil fuel in double bottom in way of holds & in deep tanks in accordance with the requirements for standard vessels.

The tunnel has been made watertight and the electric installation fitted and exam'd under working conditions and found satisfactory. It is submitted that this vessel is eligible for THE RECORD + LMC 6-18 RD.

The amount of Entry Fee ... £ 3 : 0 : 0. Special ... £ 55 : 16 : 0. Donkey Boiler Fee ... £ 1 : 0 : 0. Travelling Expenses (if any) £ 1 : 0 : 0. When applied for, 24 JUN 1918. When received, 2/8/18. Approved from London & India Dock.

Committee's Minute: + LMC 6-18 J.D. Assigned.



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