

REPORT ON MACHINERY

No. 23382

53381.

FRI. 16 AUG 1907

Port of

Received at London Office

No. in Survey held at

Date, first Survey

March 07

Last Survey

27 July

1907

Book.

on the

Steel Screw Steamer "Delia"

(Number of Voids 27)

Gross

Tons

Net

When built

1904

ster

Built at Newcastle

By whom built

Wood, Skinner & Co. Ltd.

ines made at

Sunderland

By whom made

N.E. Marine Eng. Co. Ltd.

when made

1904

lers made at

Sunderland

By whom made

N.E. Marine Eng. Co. Ltd.

when made

1904

istered Horse Power

Owners

Port belonging to

Horse Power as per Section 28

141

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

GINES, &c.—Description of Engines

Triple Expansion (Inverted)

No. of Cylinders

Three

No. of Cranks

Three

No. of Cylinders

14-28-46

Length of Stroke

33

Revs. per minute

80

Dia. of Screw shaft

as per rule 10.13

Material of

screw shaft

Is the after end of the liner made water tight

the screw shaft fitted with a continuous liner the whole length of the stern tube, no, body increased

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

are fitted, is the shaft lapped or protected between the liners — Length of stern bush 3-9

No. of Tunnel shaft as per rule 8.66

as fitted 8.5

Dia. of Crank shaft journals as per rule 9.14

as fitted 9.3

Dia. of Crank pin 9.3

Size of Crank webs 5.5 x 14.5

Dia. of thrust shaft under

bars 9.3

Dia. of screw 13-0

Pitch of Screw 13-0

No. of Blades four

State whether moveable no

Total surface 52.7

No. of Feed pumps Two

Diameter of ditto 2.3

Stroke 15

Can one be overhauled while the other is at work yes

No. of Bilge pumps Two

Diameter of ditto 3

Stroke 15

Can one be overhauled while the other is at work yes

No. of Donkey Engines Two, duplex

Sizes of Pumps 6 x 7 x 9, 5 x 3 x 5

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

In Holds, &c. M H. Two 2.5

A H. Three 2.5

Is a separate Donkey Suction fitted in Engine room & size yes 3

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

at pipes are carried through the bunkers — How are they protected strong wood casing

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

es of examination of completion of fitting of Sea Connections 26.6.07/8.8.07 of Stern Tube 24/7

Screw shaft and Propeller 24/7

he Screw Shaft Tunnel watertight yes

Is it fitted with a watertight door yes

worked from Top platform

MANUFACTURERS, &c.—(Letter for record S)

Manufacturers of Steel J. Spencer & Sons Ltd, & Beighton & Co. Ltd

al Heating Surface of Boilers 2304

Is Forced Draft fitted no

No. and Description of Boilers One single ended, cyl. mult.

Working Pressure 180 lb.

Tested by hydraulic pressure to 360 lb.

Date of test 14/5/07

No. of Certificate 2617

in each boiler be worked separately —

Area of fire grate in each boiler 60.5

No. and Description of Safety Valves to

each boiler Two, direct acting

Area of each valve 11.04

Pressure to which they are adjusted 185 lb.

Are they fitted with easing gear yes

smallest distance between boilers or uptakes and bunkers or woodwork 15

(Rule Mean dia. of boilers 15.34)

Length 10-6

Material of shell plates steel

Thickness 1.3

Range of tensile strength 28.4 to 32.4

Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams Lap 5.8

g. seams 5.85-TR

Diameter of rivet holes in long. seams 1.3

Pitch of rivets 8.13

Lap of plates or width of butt straps 18.3

er centages of strength of longitudinal joint

rivets 85.5

Working pressure of shell by rules 208 lb.

Size of manhole in shell end plate 16 x 12

plate 85.4

Size of compensating ring flanged

No. and Description of Furnaces in each boiler Three, Beighton

Material steel

Outside diameter 4.7

Length of plain part top

Thickness of plates crown 1.3

Description of longitudinal joint Weld

No. of strengthening rings

Working pressure of furnace by the rules 198 lb.

Combustion chamber plates: Material steel

Thickness: Sides 2.1

Back 5.8

Top 2.1

Bottom 4.1

itch of stays to ditto: Sides 8.1 x 8.2

Back 8 x 8

Top 8.2 x 8.2

If stays are fitted with nuts or riveted heads nuts

Working pressure by rules 210 lb.

Material of stays steel

Diameter at smallest part 1.3

Area supported by each stay 4.6

Working pressure by rules 214 lb.

Material of Front plates at bottom steel

Thickness 2.9

Pitch of stays 22.3 x 20.4

How are stays secured ON + W

Working pressure by rules 204 lb.

Material of stays steel

Diameter at smallest part 1.3

Area supported by each stay 4.6

Working pressure by rules 214 lb.

Material of Front plates at bottom steel

Thickness 2.9

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Working pressure by rules 204 lb.

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No. *One* Description *Please see attached sheet.*

Made at _____ By whom made _____

When made _____

Where fixed *Sholehold.*

Working pressure tested by hydraulic pressure to _____

Date of test _____

No. of Certificate _____

Fire grate area _____

Description of Safety _____

Valves _____

No. of Safety Valves _____

Area of each _____

Pressure to which they are adjusted _____

Date of adjustment _____

If fitted with easing gear _____

If steam from main boilers can enter the donkey boiler _____

Dia. of donkey boiler _____

Length _____

Material of shell plates _____

Thickness _____

Range of tensile strength _____

Descrip. of riveting long. seams _____

Dia. of rivet holes _____

Whether punched or drilled _____

Pitch of rivets _____

Lap of plating _____

Per centage of strength of joint _____

Rivets _____

Working pressure of shell by rules _____

Thickness of shell crown plates _____

Radius of do. _____

No. of stays to do. _____

Dia. of stays _____

Diameter of furnace Top _____

Bottom _____

Length of furnace _____

Thickness of furnace plates _____

Description of joint _____

Working pressure of furnace by rules _____

Thickness of furnace crown plates _____

Stayed by _____

Diameter of uptake _____

Thickness of uptake plates _____

Thickness of water tubes _____

Dates of survey _____

SPARE GEAR.

State the articles supplied:— *Crank shaft - propeller shaft, propeller, two top end, two bottom end, two main bearings & one set coupling bolts, feed & bilge valves, air & live pump rods, slide rods, some hangers, piston springs, anorak bolts & nuts, a few bars of iron & other small gear.*

The foregoing is a correct description,

NORTH EASTERN MARINE ENGINEERING CO. LTD.

Manufacturer.

Dates of Survey while building
During progress of work in shops— *1907 - Mch. 19, Apr. 12, May 1, 9, 13, 14, June 1, 10, 12, 14, 17, 19, 23, 28, July 1, 3, 10, 15, 16, 18, 20, 24, 25, 27*
During erection on board vessel— *June 22 - Aug. 6 - 8*
Total No. of visits *27*

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

Dates of Examination of principal parts—Cylinders *1/7* Slides *16/7* Covers *24/7* Pistons—*10/7* Rods *24/7*
Connecting rods *4/8, 28/7* Crank shaft *27/3, 4/10* Thrust shaft *15/7, 18/7* Tunnel shafts *1/15, 7/7* Screw shaft *4/5, 7/18* Propeller *10/7*
Stern tube *17/6, 28/6* Steam pipes tested *27/7* Engine and boiler seatings *22-6-07* Engines holding down bolts *24/7*
Completion of pumping arrangements *27/7 - 8* Boilers fixed *24/7* Engines tried under steam *27/7*
Main boiler safety valves adjusted *27/7* Thickness of adjusting washers *2 3/8*
Material of Crank shaft *steel* Identification Mark on Do. *464 D AB* Material of Thrust shaft *steel* Identification Mark on Do. *517 JM*
Material of Tunnel shafts *steel* Identification Marks on Do. *537 JM, 656 JM, 471 JM* Material of Screw shafts *Iron* Identification Marks on Do. *455 D AB*
Material of Steam Pipes *Copper, cold drawn, 4 1/2 bore No 6 mg.* Test pressure *400 lbs.*

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

The machinery of this vessel has been constructed under special supervision the material & workmanship sound & good, the Boiler & Steam Pipes have been subjected to hydraulic pressure test as required by Rule the Machinery worked satisfactorily at the Moorings & the Safety Valves have been adjusted under steam to their working pressure

This Vessel is Eligible in. Our Opinion to have the Notation
** LMC 8.07 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD. LMC 8.07

The amount of Entry Fee £ *2* : : When applied for, *2. 8. 1907*
Special £ *21* : *3* : :
Donkey Boiler Fee £ : : :
Travelling Expenses (if any) £ : : :
When received, *87 87 1907*

John H Heck
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

TUES. 20 AUG. 1907

Assigned

Lmc 8.07

23/11/28

MACHINERY CERTIFICATE WRITTEN.



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