

REPORT ON MACHINERY.

No. 75707

Received at London Office

Date of writing Report

19

When handed in at Local Office

17.7.

1922 Port of

NEWCASTLE-ON-TYNE.

No. in Survey held at
Reg. Book.

Newcastle

Date, First Survey

22 Feb/21

Last Survey

14 July

1922

(Number of Visits 66)

on the

"BADARPUR"

Tons

Gross

Net

Master

Built at Newcastle

By whom built

R. M. Hawthorn Leslie & Co. Ltd. No. 528

When built 1921

Engines made at Newcastle-on-Tyne

By whom made

R. M. Hawthorn Leslie & Co. Ltd. No. 3488 when made 1922

Boilers made at Newcastle-on-Tyne

By whom made

R. M. Hawthorn Leslie & Co. Ltd. when made 1922

Registered Horse Power

Owners

Burmah Oil Co. Ltd.

Port belonging to Ramgorn

Nom. Horse Power as per Section 28

715.

Is Refrigerating Machinery fitted for cargo purposes

No.

Is Electric Light fitted

Yes.

ENGINES, &c.—Description of Engines

Inserted Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

30" - 50" - 80"

Length of Stroke

54"

Revs. per minute

76.

Dia. of Screw shaft

as per rule 16.23"

Material of screw shaft

S.M. Steel

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

Yes

Length of stern bush

5'-7 1/2"

Dia. of Tunnel shaft

as per rule 14.91"

Dia. of Crank shaft journals

as per rule 15.65"

Dia. of Crank pin

16 1/2"

Size of Crank webs

24" x 10 1/2"

Dia. of thrust shaft under

collars

16 1/8"

Dia. of screw

19'-0"

Pitch of Screw

18'-0"

No. of Blades

4

State whether moveable

Yes

Total surface

135 sq

No. of Feed pumps

2 Duplex

Diameter of ditto

9"

Stroke

24"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

9" x 10" x 10"

Stroke

Duplex 9" x 10" x 10"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

1

Sizes of Pumps

9" x 12" x 21"

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

Gent Service

In Engine Room

3-3 1/2"

In Holds, &c.

None, except in forehold; 2-4" dia.

No. of Bilge Injections

1

sizes

12"

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size

Yes-3 1/2"

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

below

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

Is the Screw Shaft Tunnel watertight

None

Is it fitted with a watertight door

Yes

worked from

Yes

BOILERS, &c.—(Letter for record

S)

Manufacturers of Steel

J. Spence & Sons Ltd.

3 S.B. & 1 Aux. S.B.

Total Heating Surface of Boilers

1616

Is Forced Draft fitted

Yes

No. and Description of Boilers

3 S.S. multibutular main and 1 S.S. Auxiliary

Working Pressure

180

Tested by hydraulic pressure to

320 lbo

Date of test

2-9.6.21

No. of Certificate

2-9570

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

Oil-fueled

No. and Description of Safety Valves to

each boiler

2. Spring-loaded

Area of each valve

12.50"

Pressure to which they are adjusted

1"

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

24"

Mean dia. of boilers

16'-6"

Length

11'-6"

Material of shell plates

Steel

Thickness

1 1/8"

Range of tensile strength

28.2

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

D.R. Lap

long. seams

J.R. D.B.s.

Diameter of rivet holes in long. seams

1 7/8"

Pitch of rivets

9 3/8"

Lap of plates or width of butt straps

21 7/8"

Per centages of strength of longitudinal joint

rivets 92

Working pressure of shell by rules

184

Size of manhole in shell

16" x 12"

Size of compensating

ring 4 1/2" x 3 1/2"

No. and Description of Furnaces in each boiler

4 Deighton

Material

Steel

Outside diameter

41 1/8"

Length of plain part

top 92

Thickness of plates

crown 7 3/4"

Description of longitudinal joint

weld

No. of strengthening rings

centric 25"

Working pressure of furnace by the rules

186-1

Combustion chamber plates: Material

Steel

Thickness: Sides

3/4"

Back

wings 3/4"

Pitch of stays to ditto: Sides

8 1/2" x 8"

Back

9 1/2" x 7 1/2"

Top

8 1/2" x 8"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

266

Material of stays

Steel

Area at smallest part

1.730"

Area supported by each stay

74.80"

Working pressure by rules

208

End plates in steam space:

Material

Steel

Thickness

1 3/32"

Pitch of stays

16" x 24"

How are stays secured

J. nuts

Working pressure by rules

184

Area at smallest part

5.56

Area supported by each stay

336.0"

Working pressure by rules

182

Material of Front plates at bottom

Steel

Thickness

7/8"

Material of Lower back plate

Steel

Thickness

7/8"

Greatest pitch of stays

15"

Working pressure of plate by rules

218

Diameter of tubes

2 3/4"

Pitch of tubes

4 x 3 3/8"

Material of tube plates

Steel

Thickness: Front

7/8"

Back

7/8"

Pitch across wide water spaces

14"

Working pressures by rules

205

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

10" x 1 1/2"

Length as per rule

35 3/4"

Distance apart

8"

Number and pitch of stays in each

3-8 1/2"

Working pressure by rules

235

Steam dome: description of joint to shell

None

% 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

2020

SUPERHEATER.

Type

Schmidt

Date of Approval of Plan

28 Feb. 1921

Tested by Hydraulic Pressure to

360 lbs.

Date of Test

4/7/22

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Yes

Diameter of Safety Valve

2" dia.

Pressure to which each is adjusted

195 lbs.

Is Easing Gear fitted

Yes

Lloyd's Register

Foundation

002485-002489-0006

IS A DONKEY BOILER FITTED? *Ann. Boils*

If so, is a report now forwarded? *Yes*

SPARE GEAR. State the articles supplied:—

2 Top End Bolts, 1 pair C 12 Bottom End Bolts, 2 main Bearing Bolts, one set coupling Bolts, one set complete of Piston Rings, one Propeller shaft & Propeller Blade & 9 studs, 2 sets Top End Brasses, 2 sets Crank pin Bushes, 1 Uddi spindle, 1 Air pump rod, 1 Propeller shaft for centrifugal pump, 1 set of check valves, 1 set of Eccentric Rod Bolts, 4 sets of valves & Springs for main pump, 100 Condenser Tubes, 40 Condenser Tubes, 1 set of valves for Thrust Block, 1 set of valves for air pump, 12 Stud Bolts for main pump, one pair Eccentric Rod Brasses, one Eccentric Cheave & Strap, one set Rings & Springs for H.P. Piston valve, one In case valve spring for each set fitted, 20 Plain main Boiler tubes & 4 Stay tubes, 1 Condenser tubes, 2 Safety valve springs for main Boilers one for each, 1 set of valves & Springs for Boiler pump, 1 set of valves & Seats & Guards for General Service pump, Assorted Bolts, Nuts, Screws & Bars of Iron, Steel, Copper, The foregoing is a correct description, & read. Set of valves for one fuel Transfer pump.

Manufacturer.

1921
Dates of Survey while building
During progress of work in shops --
During erection on board vessel --
Total No. of visits

Feb. 22, Mar. 14, 24, Apr. 25, May 5, 24, 27, June 3, 29, July 5, 7, 12, 22, Aug. 4, 23, Sep. 19, 28, Oct. 5, 9, 10, 14, 17, 20, 24, 25, 27, 31, Nov. 3, 7, 9, 12, 17, 23, 25, 28, Dec. 1, 2, 5, 13, 15, 21, 30, Jan. 4, 6, 20, 30, Feb. 7, 14, 18, 27, 28, Mar. 2, 8, 15, Apr. 2, 4, 27, June 9, 24, 27, July 3, 4, 7, 14.

Is the approved plan of main boiler forwarded herewith

Yes

" " " donkey " " "

Dates of Examination of principal parts—Cylinders *25.10.21* Slides *25.10.21* Covers *8.9.21* Pistons *8.9.21* Rods *10.10.21*

Connecting rods *23.8.21* Crank shaft *7.11.21* Thrust shaft *6.1.22* Tunnel shafts *25.11.21* Screw shaft *23.11.21* Propeller *23.11.21*

Stern tube *7.10.21* Steam pipes tested *4.4.22* Engine and boiler seatings *27.2.22* Engines holding down bolts *27.2.22*

Completion of pumping arrangements *11/4/22* Boilers fixed *9.6.22* Engines tried under steam *14/4/22*

Completion of fitting sea connections *13.12.21* Stern tube *13.12.21* Screw shaft and propeller *13.12.21*

Main boiler safety valves adjusted *4/4/22* Thickness of adjusting washers *5773N* *5883N*

Material of Crank shaft *S.M.S.* Identification Mark on Do. *R.L.A. 11.21* Material of Thrust shaft *S.M.S.* Identification Mark on Do. *R.L.A. 1.22*

Material of Tunnel shafts *S.M.S.* Identification Marks on Do. *R.L.A. 11.21* Material of Screw shafts *S.M.S.* Identification Marks on Do. *R.L.A. 1.21*

Material of Steam Pipes *Steel*

Test pressure *540 lbs*

Is an installation fitted for burning oil fuel

Yes

Is the flash point of the oil to be used over 150°F.

Yes

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 and Boilers of this vessel were built under Special Survey and the materials and workmanship are good. On completion they were examined under steam and found to work satisfactorily.

The machinery throughout is now in good and efficient condition and eligible in our opinion for Classification in the Lloyds Register Book with records of L.M.C. 7.22. Fitted for oil fuel F.P. above 150°F.

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

L.M.C. - 7.22. F.D. C.L.

Fitted for Oil Fuel, 7.22, F.P. above 150°F.

L.J. 19/7/22

The amount of Entry Fee ... £ *6*

Special ... £ *110*

Donkey Boiler Fee ... £

Travelling Expenses (if any) £

When applied for,

When received,

FRI. JUL. 21 1922

Committee's Minute

Assigned

2 MACHINERY CERTS WRITTEN

+ L.M.C. 7.22 F.D. C.L. Fitted for oil fuel &c



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