

REPORT ON MACHINERY.

No. 27655

THU. JUL. 21 1914.

of writing Report 11-6-14 10

When handed in at Local Office 16-6-14 10

Received at London Office

Port of Hull

in Survey held at
g. Book.

Hull

Date, First Survey Dec 17th Last Survey 10-6-14 1914

on the steel screw steamer Destro

(Number of Visits 58)

Master

Built at Hull

By whom built Barlow & Co Ltd

Tons { Gross 859
Net 394

Engines made at

Hull

By whom made

Barlow & Co Ltd

When built 1914-6

Milers made at

Hull

By whom made

Barlow & Co Ltd

when made 1914-6

Registered Horse Power

Owners

J. Wilson Sons & Co Ltd

Port belonging to Hull

Horse Power as per Section 28 114

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 Three

Dia. of Cylinders 15"-24 1/2"-40" Length of Stroke 30"

Revs. per minute 95

Dia. of Screw shaft

as per rule 9 1/4"

Material of

steel

the screw shaft fitted with a continuous liner the whole length of the stern tube no liners

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 3'-6"

Dia. of Tunnel shaft

as per rule 7 1/2"

as fitted 7 1/8"

Dia. of Crank shaft journals

as per rule 8 1/4"

as fitted 8 1/4"

Dia. of Crank pin 8 1/4"

Size of Crank webs 16"x5 1/2"

Dia. of thrust shaft under

collars 8 1/4"

Dia. of screw 11'-6"

Pitch of Screw 11' 3"

No. of Blades 4

State whether moveable no

Total surface 40 ft

No. of Feed pumps two

Diameter of ditto 2 1/4"

Stroke 18"

Can one be overhauled while the other is at work yes

No. of Bilge pumps two

Diameter of ditto 2 1/4"

Stroke 18"

Can one be overhauled while the other is at work yes

No. of Donkey Engines two

Sizes of Pumps 6 1/4" x 4 1/4" x 6 1/2" 7 1/4" x 8" x 8"

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

In Engine Room four

2" dia. + one 2 1/2" in tunnel well

In Holds, &c. one 2 1/2" x two 2" in No. 2, one 2 1/2" in

Nos 1 & 3

No. of Bilge Injections one

size 3 1/2"

Connected to condenser, or to circulating pump pump

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

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

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 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 5-5-14

of Stern Tube 5-5-14

Screw shaft and Propeller 5-5-14

Is the Screw Shaft Tunnel watertight yes

Is it fitted with a watertight door yes

worked from top platform

BOILERS, &c.—(Letter for record S)

Manufacturers of Steel Phoenix A&C, Höpfer & Rein, Höpfer

Total Heating Surface of Boilers 2010 ft

Is Forced Draft fitted no

No. and Description of Boilers two single ended

Working Pressure 180 lbs

Tested by hydraulic pressure to 360 lbs

Date of test 1-5-14

No. of Certificate 2081

Can each boiler be worked separately yes

Area of fire grate in each boiler 31.65 ft

No. and Description of Safety Valves to

each boiler two spring loaded

Area of each valve 3.14 ft

Pressure to which they are adjusted 185 lbs

Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork about 2 ft

Mean dia. of boilers 132"

Length 10'-0"

Material of shell plates steel

Thickness 15/16"

Range of tensile strength 28-32

Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams double

long. seams L.R.A.B.1

Diameter of rivet holes in long. seams 1"

Pitch of rivets 7 1/4"

Top of plates or width of butt straps 15"

Per centages of strength of longitudinal joint rivets 86

plate 86.2

Working pressure of shell by rules 186 lbs

Size of manhole in shell 12" x 16"

Size of compensating ring 9" x 15 1/6"

No. and Description of Furnaces in each boiler two plain

Material S

Outside diameter 39 1/8"

Length of plain part top 7 1/2"

Thickness of plates bottom 7 1/2"

Description of longitudinal joint welded

No. of strengthening rings

Working pressure of furnace by the rules 208

Combustion chamber plates: Material steel

Thickness: Sides 2 1/32"

Back 2 1/32"

Top 2 1/32"

Bottom 2 1/32"

Pitch of stays to ditto: Sides 9 3/4" x 8 3/8"

Back 9" x 8 7/8"

Top 9 1/2" x 7 3/4"

If stays are fitted with nuts or riveted heads nuts

Working pressure by rules 180

Material of stays steel

Diameter at smallest part 1.76"

Area supported by each stay 77.5 ft

Working pressure by rules 181

End plates in steam space:

Material steel

Thickness 3 1/32"

Pitch of stays 15 1/2" x 15"

How are stays secured 8 ft

Working pressure by rules 180 lbs

Material of stays steel

Area at smallest part 4.22 ft

Area supported by each stay 231 ft

Working pressure by rules 189

Material of Front plates at bottom steel

Thickness 29/32"

Material of Lower back plate steel

Thickness 27/32"

Greatest pitch of stays 14" x 8 3/8"

Working pressure of plate by rules 182

Diameter of tubes 3 1/4"

Pitch of tubes 4 9/16" x 4 1/2"

Material of tube plates S

Thickness: Front 29/32"

Back 27/32"

Mean pitch of stays 11 1/4"

Pitch across wide water spaces 13 3/4"

Working pressures by rules 189 lbs

Girders to Chamber tops: Material steel

Depth and

thickness of girder at centre 7 1/2" x 1 1/2"

Length as per rule 29 1/4"

Distance apart 7 3/4"

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

Working pressure by rules 200

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

Lloyd's Register

Foundation

W 946-0113

IS A DONKEY BOILER FITTED? *no*

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, 1/2 set of feed, bilge, air, circulating & donkey pump valves, 3 pump ring studs & nuts, one main & one donkey check valve, one safety valve spring, cylinder cover studs & nuts & quantity of bolts & nuts & nuts of various size.

The foregoing is a correct description, *✓*

SHIPBUILDING & ENGINEERING CO. LIMITED.

Shubon

Manufacturer.

Dates of Survey while building { During progress of work in shops - - - 1913: Dec 17, 24 1914: Jan 9, 12, 13, 14, 21, 23, 27, Feb 5, 10, 12, 13, 16, 18, 23, 26, Mar 3, 4, 6, 9, 16, 23, 27, 28, 31, Apr 3, 6, 8, 9, 20, 22, 24, 28, 30 May 1, 4, 5, 18, 20, 22, 23, 27, 29 Jun 3, 4, 6, 8, 10.
During erection on board vessel - - -
Total No. of visits *50*

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

Dates of Examination of principal parts—Cylinders *9-3-14* Slides *13-2-14* Covers *9-3-14* Pistons *6-3-14* Rods *6-3-14*
Connecting rods *16-3-14* Crank shaft *26-2-14* Thrust shaft *26-2-14* Tunnel shafts *9-3-14* Screw shaft *9-4-14* Propeller *9-4-14*
Stern tube *4-5-14* Steam pipes tested *22-5-14* Engine and boiler seatings *28-3-14* Engines holding down bolts *22-5-14*
Completion of pumping arrangements *6-6-14* Boilers fixed *22-5-14* Engines tried under steam *6-6-14*
Main boiler safety valves adjusted *27-5-14* Thickness of adjusting washers *Port 10 3/16, S 3/8, Lt 10 3/8, S 3/8.*
Material of Crank shaft *steel* Identification Mark on Do. *1042 F.L.S.* Material of Thrust shaft *steel* Identification Mark on Do. *1043 F.L.S.*
Material of Tunnel shafts *steel* Identification Marks on Do. *1043 F.L.S.* Material of Screw shafts *steel* Identification Marks on Do. *1044 F.L.S.*
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 *no* *✓*

If so, state name of vessel *✓*

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 boilers have been tested by hydraulic pressure as above & found sound & tight. The Machinery has been properly fitted & secured in brand & on completion was tested under steam & found satisfactory. The safety valves have been adjusted & tested for accumulation.

In my opinion this vessel is eligible for the record + L.M.C. 6.14 Blue light.

It is submitted that
this vessel is eligible for
THE RECORD + L.M.C. 6.14.

J.W.D.
7/7/14 *J.H.R.*

The amount of Entry Fee ... £ *2* : *0* :
Special ... £ *17* : *2* :
Donkey Boiler Fee ... £ : :
Traveling Expenses (if any) £ : :
When applied for, *1/7/1914*
When received, *4/7/1914*

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

FRI. JUL. 3-1914

Committee's Minute

Assigned

+ L.M.C. 6.14



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Null

Certificate (if required) to be sent to
The Surveyors are requested not to write on or below the space for Committee's Minute.