

Rpt. 4.

REPORT ON MACHINERY

No. 30322

Received at London Office

THU. 17 JAN. 1918

See Hull Ltr 191/18

Date of writing Report 9-1-18 19 When handed in at Local Office 16-1-18 19 Port of Hull

No. in Survey held at Hull
Reg. Book.

Date, First Survey 3-10-17 Last Survey 15-1-18 19

(Number of Visits 22

on the steel screw trawler "George Fenwick"

Gross 324

Net 132

Master

Built at Selby

By whom built Cockburn Horsfield

When built 1918-1

Engines made at Hull

By whom made Chas. J. Holmes & Co. Ltd (A7)

when made 1918-1

Boilers made at Glasgow

By whom made Lindsay Burnett (1640)

when made 1918-1

Registered Horse Power

Owners British Admiralty

Port belonging to

Nom. Horse Power as per Section 28 87

Is Refrigerating Machinery fitted for cargo purposes no

Is Electric Light fitted no

ENGINES, &c.—Description of Engines

Triple expansion

No. of Cylinders Three

No. of Cranks 3

Dia. of Cylinders 13"-23"-37" Length of Stroke 26" Revs. per minute 117

Dia. of Screw shaft as per rule 7.9

Material of screw shaft 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

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 7.04

Dia. of Crank shaft journals as per rule 7.39

Dia. of Crank pin 7 1/2"

Size of Crank web 4 1/2" x 11"

collars 7 1/2"

Dia. of screw 9-7 1/2"

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 3/8"

Stroke 14 3/4"

Can one be overhauled while the other is at work

No. of Bilge pumps one

Diameter of ditto 2 3/8"

Stroke 14 3/4"

Can one be overhauled while the other is at work

No. of Donkey Engines one & 3 1/2"

Sizes of Pumps 6", 4 1/4" x 6" duplex

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

In Engine Room Two 2" dia

In Holds, &c. one 2" dia in each compartment

all suction also connected to ejector

No. of Bilge Injections one

size 3 1/2"

Connected to condensers or to circulating pump yes

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

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 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

Is the Screw Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

BOILERS, &c.—(Letter for record)

Manufacturers of Steel

Total Heating Surface of Boilers 1440 #

Is Forced Draft fitted no

No. and Description of Boilers one single ended

Working Pressure 200 lb

Tested by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately

Area of fire grate in each boiler

No. and Description of Safety Valves to

each boiler 2

Area of each valve 4.9 #

Pressure to which they are adjusted 205 lb

Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork

Mean dia. of boilers

Length

Material of shell plates

Thickness

Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

long. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Per centages of strength of longitudinal joint

rivets

Working pressure of shell by rules

Size of manhole in shell

Size of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

Thickness of plates

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates

Material

Thickness: Sides

Back

Top

Bottom

Pitch of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

Material of stays

Area at smallest part

Area supported by each stay

Working pressure by rules

End plates in steam space:

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of stays

Area at smallest part

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Pitch across wide water spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

thickness of girder at centre

Length as per rule

Distance apart

Number and pitch of stays in each

Working pressure by rules

Steam dome: description of joint to shell

% 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

SUPERHEATER. Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

Date of Test

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

Diameter of Safety Valve

Pressure to which each is adjusted

Is Easing Gear fitted

W1341-0093

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, one set of air, feed & bilge pump valves, one main & one donkey chest valve, two valves for donkey pump, 6 junk ring studs & nuts, one safety valve spring, 3 condenser tubes, one set of fire bars & a quantity of bolts & nuts & iron of various sizes ✓

The foregoing is a correct description,

For CHARLES D. HOLMES & CO. LTD.

Arthur Holmes

Manufacturer.

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

1917: Oct 3, 4, 11, 17, 24, 29, Nov 2, 6, 7, 9, 12, 15, 19, 23 Dec 3, 21, 1918: Jan 1, 2, 4, 5, 11, 15

22.

Is the approved plan of main boiler forwarded herewith *dup above sent*

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 24-10-17 Slides 9-11-17 Covers 7-11-17 Pistons 15-11-17 Rods 9-11-17

Connecting rods 2-11-17 Crank shaft 15-11-17 Thrust shaft 19-11-17 Tunnel shafts ✓ Screw shaft 4-10-17 Propeller 4-10-17

Stern tube 3-10-17 Steam pipes tested 27-12-17 Engine and boiler seatings 11-10-17 Engines holding down bolts 3-12-17

Completion of pumping arrangements 5-1-18 Boilers fixed 2-1-18 Engines tried under steam 5-1-18

Completion of fitting sea connections 11-10-17 Stern tube 11-10-17 Screw shaft and propeller 11-10-17

Main boiler safety valves adjusted 1-1-18 Thickness of adjusting washers $7\frac{1}{2}$ & $2\frac{3}{16}$

Material of Crank shaft *iron* Identification Mark on Do. 2055 FL Material of Thrust shaft *steel* Identification Mark on Do. 2057 F

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *steel* Identification Marks on Do. 1832 P

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 *Trinity Blast* ✓

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 machinery

has been properly fitted & secured on board the vessel & on completion was

tested under full power for two hours as required by the Admiralty & found

satisfactory. The steam pipes have been tested as above & the safety valves adjusted

under steam & tested for accumulation which did not exceed 2 1/2 lbs.

In my opinion the vessel is eligible for the next & L.M.C. 1-18