

REPORT ON MACHINERY.

No. 30998

Date of writing Report

19

When handed in at Local Office

3/4/1919 Port of Hull.

Received at London Office

SAT. 5-APR. 1919

No. in Survey held at Hull

Reg. Book.

Date, First Survey

15/5/18 Last Survey

24/3/1919

(Number of Visits 61)

Gross 290.

Net 127

When built 1919

Master

Built at Beverley

By whom built Cook, Welton & Gemmell

Engines made at Hull

By whom made Amos & Smith Ltd (n^o. 2963)

when made 1919

Boilers made at Hull

By whom made Amos & Smith Ltd (n^o. 2962)

when made 1919

Registered Horse Power

Owners British Admiralty.

Port belonging to

Nom. Horse Power as per Section 28

87.86

Is Refrigerating Machinery fitted for cargo purposes

No.

Is Electric Light fitted

No.

ENGINES, &c.—Description of Engines Triple Expansion

Dia. of Cylinders 12½"-21" & 35"

Length of Stroke 26"

Revs. per minute 112

No. of Cylinders 3

No. of Cranks 3

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

Yes.

Dia. of Screw shaft as per rule 7.5"

Material of screw shaft iron

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

Yes.

Is the after end of the liner made water tight

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.

liners are fitted, is the shaft lapped or protected between the liners

Yes.

Length of stern bush 34"

Dia. of Tunnel shaft as per rule 6.5"

as fitted 6¾"

Dia. of Crank shaft journals as per rule 6.95"

as fitted 6.91"

Dia. of Crank pin 7½"

Size of Crank webs 14" x 4½"

Dia. of thrust shaft under

collars 7½"

Dia. of screw 9"-6"

Pitch of Screw 11"-1½"

No. of Blades 4

State whether moveable

No.

Total surface 35.5 sq

No. of Feed pumps 2

Diameter of ditto 2½"

Stroke 12"

Can one be overhauled while the other is at work

Yes.

No. of Bilge pumps 2

Diameter of ditto 2½"

Stroke 12"

Can one be overhauled while the other is at work

Yes.

No. of Donkey Engines 2

Suction of Pumps 6" x 3" x 6" & 6" x 4" x 6"

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

In Engine Room One 2" engine room one 2" aft & one 2" fore

In Holds, &c. One 2" from forehold one 2" from slushwell

also separate 2" ejector suction from slushwell.

No. of Bilge Injections One sizes 3½"

Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine room & size 2" ejector

Yes.

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

Yes.

Are all connections with the sea direct on the skin of the ship

Yes.

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 Suctions.

How are they protected Wood 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

Yes.

Is it fitted with a watertight door

Yes.

worked from

Yes.

BOILERS, &c.—(Letter for record S)

Manufacturers of Steel

Port Dalgott Steel Co. Ltd.—Port Dalgott.

Total Heating Surface of Boilers 1590 sq

Is Forced Draft fitted

no.

No. and Description of Boilers one single ended.

Working Pressure 180 lbs.

Tested by hydraulic pressure to 360 lbs.

Date of test 21/12/18

No. of Certificate 3342.

Can each boiler be worked separately

Yes.

Area of fire grate in each boiler 48.75 sq

No. and Description of Safety Valves to

each boiler two spring loaded

Area of each valve 4.9 sq

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 12½"

INT.

dia. of boilers 16"

Length 10'-6½"

Material of shell plates steel.

Thickness 13/32"

Range of tensile strength 28/32 lbs.

Are the shell plates welded or flanged

No.

Descrip. of riveting: cir. seams double.

long. seams T.R.D.B.S.

Diameter of rivet holes in long. seams 15/32"

Pitch of rivets 8"

Top of plates width of butt straps 17"

Per centages of strength of longitudinal joint

rivets 89.3

plate 85.5

Working pressure of shell by rules 180 lbs.

Size of manhole in shell 16" x 12"

Size of compensating ring 9" x 13/32"

No. and Description of Furnaces in each boiler 3 plain

Material steel

Outside diameter 40 7/16"

Length of plain part top 8 1/2"

bottom 7 1/2"

Thickness of plates crown 3 1/2"

bottom 3 1/2"

Description of longitudinal joint welded.

No. of strengthening rings

Working pressure of furnace by the rules 188

Pitch of stays to ditto: Sides 9 1/2" x 9 3/8"

Back 9" x 9"

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

If stays are fitted with nuts or riveted heads

nuts.

Working pressure by rules 182.

Material of stay: steel.

Area at smallest part 2.07 sq

Area supported by each stay 90.25 sq

Working pressure by rules 206

End plates in steam space:

Material steel

Thickness 1 1/2"

Pitch of stays 17 3/8" x 17"

How are stays secured DN & W

Working pressure by rules 181

Material of stays steel

Area at smallest part 6.1 sq

Area supported by each stay 29.5 sq

Working pressure by rules 215

Material of Front plates at bottom steel.

Thickness 3 1/2"

Material of Lower back plate steel.

Thickness 1 5/8"

Greatest pitch of stays 14" x 9"

Working pressure of plate by rules 219.

Diameter of tubes 3 1/2"

Pitch of tubes 5" x 4 3/4"

Material of tube plates steel

Thickness: Front 3 1/2"

Back 7/8"

Mean pitch of stays 10"

Pitch across wide water spaces 14"

Working pressures by rules 184.

Girders to Chamber tops: Material steel.

Depth and

Thickness of girder at centre 8 1/2" x 13/4"

Length as per rule 32"

Distance apart 9 1/2"

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

Working pressure by rules 197 lbs.

Steam dome: description of joint to shell

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

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

Pressure to which each is adjusted

Is Easing Gear fitted

Lloyd's Register

Foundation

W649-0102

IS A DONKEY BOILER FITTED? No.

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:-

Two top & two bottom end bolts & nuts, one set coupling bolts & nuts, two main bearing bolts & nuts, one set each of Air Reed & Bilge Pump Valves, one set piston studs & nuts, three condenser tubes, three boiler tubes, one escape valve spring of each size, two donkey pump suction & delivery valves, a quantity of assorted bolts & nuts, & iron of assorted sizes.

The foregoing is a correct description,

FOR AMOS & SMITH LTD.

H. P. R. Chubb

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 19/8: May 15.22 Jun 7.14 18.20.25.29 Jul 3.8.19.11.15 26.30 Aug 3.13.15.22.24
During erection on board vessel - - 26.29 Sep 2.5.10.14.17.30 Oct 28.29 Nov 28.29 Dec 5.11.16.17.18.20.21.30 1919: Jan 2.4.
Total No. of visits 67
Is the approved plan of main boiler forwarded herewith ^{previously sent} ✓

Dates of Examination of principal parts—Cylinders 28/11/18 Slides 5/12/18 Covers 5/12/18 Pistons 5/12/18 Rods 11/12/18
Connecting rods 11/12/18 Crank shaft 5/12/18 Thrust shaft 16/12/18 Tunnel shafts ✓ Screw shaft 24/8/18 Propeller 24/8/18
Stern tube 24/8/18 Steam pipes tested 10/1/19 Engine and boiler seatings 11/12/18 Engines holding down bolts 11/3/19
Completion of pumping arrangements 19/3/19 Boilers fixed 11/3/19 Engines tried under steam 15/3/19
Completion of fitting sea connections 26/8/18 Stern tube 26/8/18 Screw shaft and propeller 26/8/18
Main boiler safety valves adjusted 15/3/19. Thickness of adjusting washers P 3/8" B S 23/64
Material of Crank shaft steel Identification Mark on Do. 2981 WNS Material of Thrust shaft steel Identification Mark on Do. 2982 WNS
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts iron Identification Marks on Do. 1909 JR
Material of Steam Pipes Copper (solid drawn) Test pressure 360 lbs/sq. in.
Is an installation fitted for burning oil fuel ✓ 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 John Gauntlett

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 the Society. The material & workmanship are good. The boiler & steam pipes have been tested as above & found sound & good. The machinery has been properly fitted & secured on board the vessel & on completion was tested at full power for two hours as required by the Admiralty & found satisfactory. The safety valves have been adjusted under steam & accumulation did not exceed 10 lbs. In my opinion the vessel is eligible for the record + L.M.C. 3, 19

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 3. 19.

The amount of Entry Fee, £ 2 : 0 : - When applied for, 26/3 1919
Special £ 26 : 2 : -
Donkey Boiler Fee £ : : -
Travelling Expenses (if any) £ : : -
When received, 27/3 1919

Committee's Minute

Assigned

TUE SEP 7 1920

TUE MAR 22 1921

MACHINERY CERTIFICATE WRITTEN

W. Stone

Engineer Surveyor to Lloyd's Register of Shipping.

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