

REPORT ON MACHINERY.

No. 73567.

Date of writing Report

8th Sept 1920

When handed in at Local Office

8th Sept 1920

Port of

Received at London Office

SEP 22 1920

No. in Survey held at

Farron on Tyne

Date, First Survey

9th May

Last Survey

28th Aug 1920

Reg. Book.

on the S.S. NAWORTH ex Killour (patrol gunboat)

(Number of Visits 27)

Tons

Gross 630

Net 277

Master

Built at Middlesbrough

By whom built

Smiths Dock Co Ltd

When built

1918-9

Engines made at

Sunderland

By whom made

North Eastern Marine Co Ltd

when made

1918

Boilers made at

Sunderland

By whom made

do

when made

1918

Registered Horse Power

Owners

(Joplin & Hull)

Port belonging to

Newcastle

Nom. Horse Power as per Section 28

168 116

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

16" 26" 44"

Length of Stroke

26"

Revs. per minute

✓

Dia. of Screw shaft

as per rule 8.5"

Material of

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

✓

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

✓

Dia. of Tunnel shaft

as per rule 7.35"

Dia. of Crank shaft journals

as per rule 8.35"

Dia. of Crank pin

8 3/4"

Size of Crank webs

16 1/2 x 5 1/4"

Dia. of thrust shaft under

collars

8 1/2"

Dia. of screw

9-6"

Pitch of Screw

8-6"

No. of Blades

4

State whether moveable

No

Total surface

36 sq ft

No. of Feed pumps

2

Diameter of ditto

7"

Stroke

18"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

6"

Stroke

6"

Can one be overhauled while the other is at work

✓

No. of Donkey Engines

one

Sizes of Pumps

6" 6" 6"

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

In Engine Room Three 2 1/2" to donkey pump & ejector In Holds, &c. One 2 1/2" No 1. one 2 1/2" No 2

No. of Bilge Injections

1

sizes

6"

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size

yes: 2 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

✓

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

What pipes are carried through the bunkers

Main bilge line

How are they protected

Wood casing

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

Engine Room platform

Boilers, &c.—(Letter for record

5)

Manufacturers of Steel

J. Spencer & Son Ltd

BOILERS, &c.—(Letter for record

5)

Manufacturers of Steel

J. Spencer & Son Ltd

Total Heating Surface of Boilers

1825 sq ft

Is Forced Draft fitted

No

Working Pressure

200 lb per sq in

Tested by hydraulic pressure to

200 lb per sq in

No. and Description of Boilers

One Single Ended

Can each boiler be worked separately

✓

Area of fire grate in each boiler

51.5 sq ft

No. and Description of Safety Valves to each boiler

Smallest distance between boilers or uptakes and bunkers or woodwork

9"

Mean dia. of boilers

13-0"

Length

11-6"

Material of shell plates

Steel

Thickenss

1 1/4"

Range of tensile strength

28/32 tons

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

DR Lap

long. seams

TR. DBS

Diameter of rivet holes in long. seams

1 1/4"

Pitch of rivets

8 1/2"

width of butt straps

18 5/8"

Per centages of strength of longitudinal joint

rivets 91.8

plate 85.29

Working pressure of shell by rules

200 lb

Size of manhole in shell

16 x 12"

Size of compensating ring

7 x 1 1/4"

No. and Description of Furnaces in each boiler

3 Brighton

Material

Steel

Outside diameter

41 7/8"

Length of plain part

top 7 1/2"

Thickness of plates

bottom 7 1/2"

Description of longitudinal joint

Welded

No. of strengthening rings

None

Working pressure of furnace by the rules

211

Combustion chamber plates: Material

Steel

Thickness: Sides

1/16"

Back

1/16"

Top

1/16"

Bottom

1/16"

Pitch of stays to ditto: Sides

8 3/4" x 9"

Back

8 3/4" x 5 1/2"

Top

8 3/4" x 9"

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

207

Material of stays

Steel

Area at smallest part

2.070

Area supported by each stay

75 3/4"

Working pressure by rules

235

End plates in steam space:

Material

Steel

Thickness

1 1/32"

Area at smallest part

6.330

Area supported by each stay

272 0"

Working pressure by rules

242

Material of Front plates at bottom

Steel

Thickness

1"

Material of Lower back plate

Steel

Thickness

1"

Greatest pitch of stays

14 1/2" x 8 3/4"

Working pressure of plate by rules

241

Diameter of tubes

2 1/2"

Pitch of tubes

3 3/4" x 3 1/6"

Material of tube plates

Steel

Thickness: Front

1"

Back

13/16"

Mean pitch of stays

8 3/5"

Pitch across wide water spaces

13 1/4"

Working pressures by rules

204 lb

Girders to Chamber tops: Material

Steel

Depth and thickness of girder at centre

8" x 1 3/4"

Length as per rule

31 1/4"

Distance apart

8 1/2"

Number and pitch of stays in each

No 9"

Working pressure by rules

202 lb

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

✓

SUPERHEATER. Type

None

Date of Approval of Plan

✓

Tested by Hydraulic Pressure to

Lloyd's Register

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

✓

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied: *No top & 2 bottom end bolts & nuts, 2 main bearing bolts & nuts, one set of coupling bolts & nuts, valves for Harris and Danson donkey pumps and air pump, a few bars of iron and a quantity of assorted bolts & nuts. etc.*

The foregoing is a correct description,

Manufacturer.

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

Is the approved plan of main boiler forwarded herewith *No*

" " " donkey " " " ☒

Dates of Examination of principal parts—Cylinders *16/8/20* Slides *16/8/20* Covers *16/8/20* Pistons *16/8/20* Rods *16/8/20*

Connecting rods *16/8/20* Crank shaft *16/8/20* Thrust shaft *16/8/20* Tunnel shafts *16/8/20* Screw shaft *examined* Propeller *26/6/20*

Stern tube *24/6/20* Steam pipes tested *18/8/20* Engine and boiler seatings *26/6/20* Engines holding down bolts *26/6/20*

Completion of pumping arrangements *24/8/20* Boilers fixed *18/8/20* Engines tried under steam *24/8/20*

Completion of fitting sea connections *24/6/20* Stern tube *26/6/20* Screw shaft and propeller *26/6/20*

Main boiler safety valves adjusted *24/8/20* Thickness of adjusting washers *9/32" & 5/16"*

Material of Crank shaft ☒ Identification Mark on Do. ☒ Material of Thrust shaft ☒ Identification Mark on Do. ☒

Material of Tunnel shafts ☒ Identification Marks on Do. ☒ Material of Screw shafts ☒ Identification Marks on Do. ☒

Material of Steam Pipes *Steel* Test pressure *600 lbs per sq in.*

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 ☒ If so, state name of vessel ☒

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel was*)

originally built and fitted under the supervision of the British Corporation Surveyors.

Survey was held for classification in this Society. When in dry dock, the propeller, aft end of stern bush, the sea cocks & fastenings were examined. (The propeller shaft was not drawn). The after boiler, the forced draught fan and engine, air heating tubes and one donkey pump 7" x 4 1/2" x 5" have been removed and put on shore, the forward boiler its safety valves and mountings were examined, a few holes drilled in the plates and the seatings compared with the 1st entry report on the S.S. Kildare (built to class) and found to agree with same. This boiler is now the only one fitted on board. The main engines were opened out and measurements taken of the, crank, thrust and intermediate shafts & cylinders and the sizes are shown on other side, the several parts of the main engines, donkey pumps & auxiliaries were examined, coupled up and tried under full steam pressure.

The amount of Entry Fee ... £ : :
Special ... £ 10 : 10 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, *21 SEP 1920*
When received, *15/10/20*

Committee's Minute *FRI OCT 1 1920*

Assigned *Ldn 6.8.20*

The machinery of this vessel so far as seen is now in good condition and is eligible for record
2nd C 8.20 (in red in register book.)

George Murdoch
Engineer Surveyor to Lloyd's Register of Shipping.

MANCHESTER COAST
WATER

105 NOV 25 1921

Lloyd's Register
Foundation