

REPORT ON MACHINERY.

Received at London Office

SEP. 22 1920

Date of writing Report 8th Sept 1920 When handed in at Local Office 8th Sept 1920 Port of Newcastle on Tyne
 No. in Survey held at Farron on Tyne Date, First Survey 9th May Last Survey 27th Aug 1920
 Reg. Book. S.S. NAWORTH ex Killour (patrol gunboat) (Number of Visits 27)
 Master Smiths Dock Co Ltd 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 (John Hull) Owners (John 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

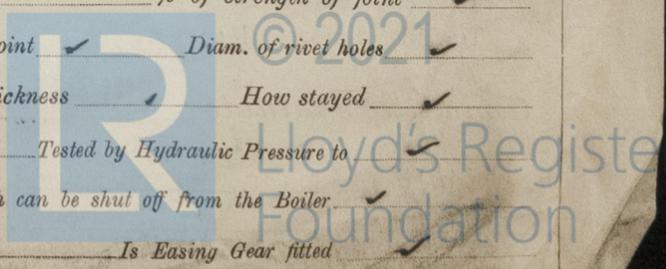
ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 16" 26" & 44" Length of Stroke 26" Revs. per minute ✓ Dia. of Screw shaft 8.5" Material of Steel
 as fitted 8.5" screw shaft)
 Is the screw shaft fitted with a continuous liner the whole length 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 ✓ If two
 liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 48 1/2"
 Dia. of Tunnel shaft 7.95" as per rule 8.5" Dia. of Crank shaft journals 8.35" as per rule 8.5" Dia. of Crank pin 8 3/4" Size of Crank webs 16 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 6 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" x 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
one 2 1/2" in aft hold and one 2 1/2" in tunnel well.
 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 Are the Blow Off Cocks fitted with a spigot and brass covering plate 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
 Total Heating Surface of Boilers 1825 sq ft Is Forced Draft fitted No No. and Description of Boilers One Single Ended
 Working Pressure 200 lb per sq in Tested by hydraulic pressure to 200 lb per sq in Date of Examination No. of Certificate ✓
 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 one direct opening Area of each valve 5.94 sq ft Pressure to which they are adjusted 205 lb per sq in Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 9" inside Mean dia. of boilers 13-0" Length 11-6" Material of shell plates Steel
 Thickness 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 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 Dighton Material Steel Outside diameter 41 7/8"
 Length of plain part top Thickness of plates bottom 1 9/16" 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 1/2" 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 3/32" Pitch of stays 17" x 16" How are stays secured Double nuts Working pressure by rules 242 Material of stays Steel
 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 1/4" Working pressure of plate by rules 241
 Diameter of tubes 2 1/2" Pitch of tubes 3 3/4" x 3 1/16" 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 two 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 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 ✓

If not, state whether, and when, one will be sent

6110-28911



IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied: *Two 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 *14/8/20* Crank shaft *14/8/20* Thrust shaft *14/8/20* 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" 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 scantlings 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*

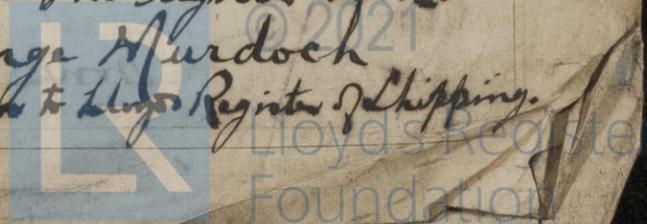
The machinery of this vessel so far as seen is now in good condition and is in my opinion eligible for record in the register book.

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

Committee's Minute *FRI. OCT. 1 1920*
Assigned *Dr. B. S. 20*

MANCHESTER COAST
WRITER

OCT. NOV. 25 1921



NEWCASTLE-ON-TYNE

Certificate (if required) to be sent to

The Surveyors are requested not to write on or below the space for Committee's Minutes