

Rpt. 4.

REPORT ON MACHINERY.

No. 83241

Received at London Office 29 JUN 1920

Date of writing Report 29 JUN 1920 10 When handed in at Local Office 29 JUN 1920 10 Port of London

No. in Survey held at Shoosham Date, First Survey Mar 10th Last Survey May 28th 1920
 Reg. Book. on the Concrete Tug "Cretblock" (Number of Visits 3) Tons ^{Gross} 1920 _{Net}

Master John van Niche Built at Shoosham By whom built John van Niche When built 1920

Engines made at Bradford By whom made Messrs. Grand Rapids & Co. Ltd. when made 1920
Messrs. Newton, Bean & Mitchell. (No. 171 B)

Boilers made at Oldbury By whom made E. Danks & Co. 8060+6661 when made

Registered Horse Power _____ Owners _____ Port belonging to _____

Nom. Horse Power as per Section 28 _____ Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines No. of Cylinders _____ No. of Cranks _____

Dia. of Cylinders _____ Length of Stroke _____ Revs. per minute _____ Dia. of Screw shaft ^{as per rule} _____ ^{as fitted} 8 1/2" Material of screw shaft _____

Is 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 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 3' 4"

Dia. of Tunnel shaft ^{as per rule} _____ ^{as fitted} _____ Dia. of Crank shaft journals ^{as per rule} _____ ^{as fitted} _____ Dia. of Crank pin _____ Size of Crank webs _____ Dia. of thrust shaft under collars _____ Dia. of screw _____ Pitch of Screw _____ No. of Blades _____ State whether moveable _____ Total surface _____

No. of Feed pumps _____ Diameter of ditto _____ Stroke _____ Can one be overhauled while the other is at work _____

No. of Bilge pumps _____ Diameter of ditto _____ Stroke _____ Can one be overhauled while the other is at work _____

No. of Donkey Engines 2 Sizes of Pumps 6x4x6, 5x5x6 Dup No. and size of Suctions connected to both Bilge and Donkey pumps _____

In Engine Room To be fitted at Sunderland In Holds, &c. _____

No. of Bilge Injections _____ sizes _____ Connected to condenser, or to circulating pump _____ Is a separate Donkey Suction fitted in Engine room & size _____

Are all the bilge suction pipes fitted with roses _____ Are the roses in Engine room always accessible _____ Are the sluices on Engine room bulkheads always accessible no

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 _____ How are they protected _____

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times _____

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges _____

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 _____ Is Forced Draft fitted Yes No. and Description of Boilers Two Single Ended.

Working Pressure _____ 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 _____

Area of each valve _____ Pressure to which they are adjusted _____ Are they fitted with easing gear _____

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 ^{ribs} _____ ^{plate} _____ 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 ^{top} _____ ^{bottom} _____ Thickness of plates ^{top} _____ ^{bottom} _____ 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 _____

If ref. state whether, and when, any will be sent. In a Report also sent on the hull of the ship.

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

NO SPARE GEAR

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - }
{ During erection on board vessel - - - } *1930 Mar 10 13 June 28*
Total No. of visits *3*

Is the approved plan of main boiler forwarded herewith

Is the approved plan of donkey boiler forwarded herewith

Dates of Examination of principal parts—Cylinders Slides Covers Pistons Rods

Connecting rods Crank shaft Thrust shaft Tunnel shafts Screw shaft Propeller

Stern tube Steam pipes tested Engine and boiler seatings *28/5720* Engines holding down bolts

Completion of pumping arrangements Boilers fixed Engines tried under steam

Completion of fitting sea connections *14/5720* Stern tube *28/5720* Screw shaft and propeller *28/5720*

Main boiler safety valves adjusted Thickness of adjusting washers

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 Test pressure

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 If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)

The stern tube, tail shaft, propeller, sea connections, discharge valves, donkey pumps, evaporator & forced draught fan have been satisfactorily fitted in place.

The engines & boilers are to be installed by Messrs MacColl & Pollock, Ltd., Sunderland.

The wiring for the electric light has been put in here but the installation is to be completed at Sunderland by electricians:— Telford Guise & Mackay, Ltd., Glasgow.

The amount of Entry Fee	£	:	:	When applied for,
Special	£	:	:	19
Donkey Boiler Fee	£	:	:	When received,
Travelling Expenses (if any)	£	:	:	19

H Gardner-Smith
Engineer Surveyor to Lloyd's Register of Shipping.
Ed. W. Hutton

Committee's Minute *FRI. SEP. 17 1920*
Assigned *+ Lmb 9.20*
J.H.D.



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