

REPORT ON MACHINERY.

No. 28617

WED. JUL 18 1923

Received at London Office

Date of writing Report 19 When handed in at Local Office 16th July 1923 Port of SUNDERLAND
 No. in Survey held at SUNDERLAND Date, First Survey 6th Feb Last Survey 13-7-1923
 Reg. Book. on the new steel S/S "GWENTLAND" (Number of Visits 29) Tons { Gross 1821 Net 1090
 Master Built at Sunderland By whom built R. Thompson & Sons Ltd (S/S N° 319) When built 1923
 Engines made at Sunderland By whom made North Eastern Marine Engineering Co Ltd (N° 2526) when made 1923
 Boilers made at Sunderland By whom made North Eastern Marine Engineering Co Ltd (N° 2526) when made 1923
 Registered Horse Power Owners M. Ordey, Jones & Co Ltd Port belonging to Newport, Mon.
 Nom. Horse Power as per Section 28 214 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 20" 33" - 54" Length of Stroke 39" Revs. per minute 73 Dia. of Screw shaft as per rule 11.74" 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 - 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 If two
 liners are fitted, is the shaft lapped or protected between the liners - Length of stern bush 4.0"
 Dia. of Tunnel shaft as per rule 10.91" Dia. of Crank shaft journals as per rule 10.72" Dia. of Crank pin 10 3/4" Size of Crank webs 6 3/4" x 1 1/4" Dia. of thrust shaft under
 collars 10 3/4" Dia. of screw 14.9" Pitch of Screw 15.0" No. of Blades 4 State whether moveable no Total surface 670 sq ft
 No. of Feed pumps 2 Diameter of ditto 3" Stroke 1.9" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 1.9" Can one be overhauled while the other is at work yes
 No. of Donkey Engines 3 Sizes of Pumps 5 1/2 x 5 1/2 5 3/4 x 4 1/2 7 9/16 x 9" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 3 @ 2 1/2" In Holds, &c. Forward hold - 2 @ 2 3/4" After
hold - 3 @ 2 3/4" Tunnel well - 1 @ 2 1/4"
 No. of Bilge Injections 1 sizes 6" Connected to condenser, or to circulating pump 6 P. Is a separate Donkey Suction fitted in Engine room & size yes, 5 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 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 main below, others 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 hold suction How are they protected under limber boards
 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 top platform.

BOILERS, &c.—(Letter for record (3)) Manufacturers of Steel John Spencer & Sons Ltd
 Total Heating Surface of Boilers 35260 Is Forced Draft fitted no No. and Description of Boilers two, single ended marine
 Working Pressure 180 Tested by hydraulic pressure to 320 Date of test 7.5.23 No. of Certificate 3832
 Can each boiler be worked separately yes Area of fire grate in each boiler 460 sq ft No. and Description of Safety Valves to
 each boiler two direct spring Area of each valve 5.940 Pressure to which they are adjusted 185 Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 13.9 23/32" Length 10.6" Material of shell plates steel
 Thickness 1 9/64" Range of tensile strength 28-52 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams 19R
 Long. seams 19BS, TR Diameter of rivet holes in long. seams 1 1/32" Pitch of rivets 8 7/16" Lap of plates or width of butt straps 1.6 1/8"
 Percentages of strength of longitudinal joint rivets 92 Working pressure of shell by rules 181 Size of manhole in end 16" x 12"
 Size of compensating ring flanged No. and Description of Furnaces in each boiler 3 Heighton Material steel Outside diameter 36 15/16"
 Length of plain part top 15" Thickness of plates crown 1 15/32" Description of longitudinal joint welded No. of strengthening rings -
 Working pressure of furnace by the rules 181 Combustion chamber plates: Material steel Thickness: Sides 23/32" Back 3/4" Top 23/32" Bottom 23/32"
 Pitch of stays to ditto: Sides 10 1/4" x 9 3/4" Back 10 1/2" x 10 1/16" Top 9 3/4" x 9" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 181
 Material of stays steel Area at smallest part 2.030 Area supported by each stay 99.90 Working pressure by rules 181 End plates in steam space:
 Material steel Thickness 1 1/4" Pitch of stays 24 1/16" x 17 3/8" How are stays secured DN & W Working pressure by rules 180 Material of stays steel
 Area at smallest part 7.660 Area supported by each stay 4280 Working pressure by rules 199 Material of Front plates at bottom steel
 Thickness 7/8" Material of Lower back plate steel Thickness 27/32" Greatest pitch of stays 14 1/2" x 10 7/16" Working pressure of plate by rules 182
 Diameter of tubes 3 1/4" Pitch of tubes 4 3/4" x 4 1/2" Material of tube plates steel Thickness: Front 7/8" Back 3/4" Mean pitch of stays 10 1/2"
 Pitch across wide water spaces 14 1/2" Working pressures by rules 182 Girders to Chamber tops: Material steel Depth and
 thickness of girder at centre 20 8/8" x 7/8" Length as per rule 31.5" Distance apart 9" + 9 1/2" Number and pitch of stays in each 2 @ 9 3/4"
 Working pressure by rules 188 Steam dome: description of joint to shell none % of strength of joint

DIAPHRAGM. 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 _____

IS A DONKEY BOILER FITTED? *yes*

If so, is a report now forwarded? *yes*

SPARE GEAR. State the articles supplied:— *Two connecting rod top and bottom end bolts and nuts, two main bearing bolts, one set of coupling bolts, one set of feed and bridge pump valves, iron and bolts of various sizes, one propeller.*

The foregoing is a correct description,

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LTD.

C. T. Adams, Manufacturer.

Dates of Survey while building: During progress of work in shops — *1923. Feb. 6, 22, 26. Mch. 12, 14, 16. Apr. 12, 19, 27. May 2, 4, 9, 11, 15, 25, 31. June 14, 19.*
During erection on board vessel — *21, 22, 25, 26, 27. July 2, 6, 13.*
Total No. of visits *29.*

Is the approved plan of main boiler forwarded herewith *yes*

Is the approved plan of main boiler forwarded herewith *yes*

Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders *4-5-23* Slides *15-5-23* Covers *9-5-23* Pistons *15-5-23* Rods *15-5-23*

Connecting rods *13-4-23* Crank shaft *14-5-23* Thrust shaft *31-5-23* Tunnel shafts *31-8-23* Screw shaft *31-5-23* Propeller *31-5-23*

Stern tube *25-6-23* Steam pipes tested *22-6-23* Engine and boiler seatings *14-6-23* Engines holding down bolts *25-6-23*

Completion of pumping arrangements *2-7-23* Boilers fixed *21-6-23* Engines tried under steam *2-7-23*

Completion of fitting sea connections *14-6-23* Stern tube *14-6-23* Screw shaft and propeller *19-6-23*

Main boiler safety valves adjusted *26-6-23* Thickness of adjusting washers *Std. br. F 1/2", A 3/8". Pist. br. F 3/2", A 3/8".*

Material of Crank shaft *9. steel* Identification Mark on Do. *LLOYD'S NO 6484 (date as above) L.C.D.* Material of Thrust shaft *9. steel* Identification Mark on Do. *LLOYD'S NO 6484 31-5-23 D*

Material of Tunnel shafts *9. steel* Identification Marks on Do. *LLOYD'S NO 6484 (date as above) L.C.D.* Material of Screw shafts *9. steel* Identification Marks on Do. *LLOYD'S NO 6484 31-5-23 D*

Material of Steam Pipes *Lapwelded wrought iron* Test pressure *540 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 *no* If so, state name of vessel *-*

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

The materials and workmanship are good. The machinery has been constructed under special survey and is eligible in my opinion for classification and the record + LMC 7, 23.

It is submitted that this vessel is eligible for THE RECORD. + LMC 7. 23. CL.

AWD
19/7/23
ARR

S. C. Davis
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ *4* : -
Special ... £ *53* : *10*
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for. *16 JUL 1923*
When received. *23*

Committee's Minute *FRI 3 AUG 1923*
Assigned *+ LMC 7. 23*



SUNDERLAND.

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

CERTIFICATE WRITTEN