

REPORT ON MACHINERY.

No. 27338

Received at London Office

TUE. SER. 2. 1. 1918

Date of writing Report 12-9-1918 When handed in at Local Office 12-9-1918 Port of Sunderland
No. in Survey held at Sunderland Date, First Survey 12th April 18 Last Survey 11 Sept 1918
Reg. Book. 703 on the new steel "WAR TEMPEST".
Master Merifield Built at Sunderland By whom built R. Thompson & Sons Ltd (S/NP-306) When built 1918
Engines made at Sunderland By whom made North Eastern Marine Eng Co Ltd (N° 2328) when made 1918
Boilers made at Sunderland By whom made North Eastern Marine Eng Co Ltd (N° 2312) when made 1918
Registered Horse Power Owners The Shipping Controller (Hurst & Co) Port belonging to London
Nom. Horse Power as per Section 28 430 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 25"-41"-68 Length of Stroke 46" Revs. per minute 80 Dia. of Screw shaft as per rule 13.58" Material of O.H. steel as fitted 14.2" 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 5'-0"
Dia. of Tunnel shaft as per rule 12.4" Dia. of Crank shaft journals as per rule 13.05" Dia. of Crank pin 13.4" Size of Crank webs 8 3/16" x 20 1/2" Dia. of thrust shaft under collars 13 1/4" Dia. of screw 16'-0" Pitch of Screw 16'-3" No. of Blades 4 State whether moveable no Total surface 76 ft
No. of Feed pumps 2 Diameter of ditto 3 1/2" Stroke 24" Can one be overhauled while the other is at work yes
No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 24" Can one be overhauled while the other is at work yes
No. of Donkey Engines 3 Sizes of Pumps 2 @ 9 1/2" x 7 x 18. 1 @ 10 1/2" x 12 1/2" x 21 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 4 @ 3" In Holds, &c. N° 1 hold. 2 @ 3". N° 2 hold. - 2 @ 3".
In Engine Room 4 @ 3" N° 3 hold. - 2 @ 3" N° 4 hold 2 @ 2 1/2" x 1 @ 3 1/2". Tunnel well - 1 @ 2 1/2"
No. of Bilge Injections 1 sizes 8" Connected to condenser, or to circulating pump BP Is a separate Donkey Suction fitted in Engine room & size yes. 3 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 discharge below other 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 timber 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 no worked from access by trunk from deck.

BOILERS, &c.—(Letter for record (S)) Manufacturers of Steel John Spence & Sons Ltd
Total Heating Surface of Boilers 6304 ft Is Forced Draft fitted yes No. and Description of Boilers three single ended marine
Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 4-7-18 No. of Certificate 3483
Can each boiler be worked separately yes Area of fire grate in each boiler 51 ft No. and Description of Safety Valves to each boiler two direct spring Area of each valve 8'29" Pressure to which they are adjusted 185 Are they fitted with easing gear yes
Smallest distance between boiler or uptakes and bunkers on woodwork 18" Mean dia. of boilers 14'-0" Length 11-8 1/2" Material of shell plates steel
Thickness 1 1/8" Range of tensile strength 28 3/4-33 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams W.R.
long. seams DBS.T.R. Diameter of rivet holes in long. seams 1 3/16" Pitch of rivets 8 1/2" Lap of plates or width of butt straps 1'-6"
Per centages of strength of longitudinal joint rivets 86.1 Working pressure of shell by rules 187 Size of manhole in shell 16" x 12"
Size of compensating ring flanged No. and Description of Furnaces in each boiler 3 Deighton Material steel Outside diameter 3'-7"
Length of plain part top ✓ Thickness of plates crown 3 1/2" Description of longitudinal joint welded No. of strengthening rings ✓
bottom ✓ Working pressure of furnace by the rules 190 Combustion chamber plates: Material steel Thickness: Sides 1 1/16" Back 3/4" Top 1 1/16" Bottom 1 1/16"
Pitch of stays to ditto: Sides 9 3/8" x 9" Back 9" x 10 1/2" Top 9" x 9 3/8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 194
Material of stays steel Area at smallest part 2.03 sq ft Area supported by each stay 9.45 sq ft Working pressure by rules 216 End plates in steam space:
Material steel Thickness 1 1/32" Pitch of stays 23 3/4" x 19 1/2" How are stays secured DN&W Working pressure by rules 181 Material of stays steel
Area at smallest part 8.29 sq ft Area supported by each stay 4.64 sq ft Working pressure by rules 186 Material of Front plates at bottom steel
Thickness 3 1/32" Material of Lower back plate steel Thickness 3 3/32" Greatest pitch of stays 13 1/2" x 9" Working pressure of plate by rules 185
Diameter of tubes 2 3/4" Pitch of tubes 4'-4" Material of tube plates steel Thickness: Front 3 1/2" Back 3 1/2" Mean pitch of stays 10"
Pitch across wide water spaces 13 1/2" Working pressures by rules 184 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 2 @ 10 1/2" x 3/4" Length as per rule 2'-11 1/2" Distance apart 9 3/8" Number and pitch of stays in each 3 @ 9"
Working pressure by rules 200 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
Tested by Hydraulic Pressure to

SUPERHEATER. Type Date of Approval of Plan Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Is Easing Gear fitted
Date of Test Pressure to which each is adjusted

WS89-0150

IS A DONKEY BOILER FITTED? *no*

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

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 bilge pump valves iron and bolts of various sizes, one propeller.*

The foregoing is a correct description,

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD

Geo. S. Lewis

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } *1918. Feb 12-18. Apr 16-24. 29-30. May 13-15. 22-28-30. Jun 4-6. 7-11. 14-17. 25. Jul 4. Aug 24-26.*
{ During erection on board vessel - - } *22-26. 27-31. Sep 1-11*
Total No. of visits *(32)*

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

Dates of Examination of principal parts—Cylinders *24-4-18* Slides *28-5-18* Covers *15-5-18* Pistons *28-5-18* Rods *22-5-18*
Connecting rods *29-4-18* Crank shaft *29-4-18* Thrust shaft *7-6-18* Tunnel shafts *4-7-18* Screw shaft *4-7-18* Propeller *4-6-18*
Stern tube *7-8-18* Steam pipes tested *20-8-18* Engine and boiler seatings *2-8-18* Engines holding down bolts *12-8-18*
Completion of pumping arrangements *11-9-18* Boilers fixed *12-8-18* Engines tried under steam *22-8-18*
Completion of fitting sea connections *23-7-18* Stern tube *2-8-18* Screw shaft and propeller *2-8-18*
Main boiler safety valves adjusted *22-8-18* Thickness of adjusting washers *Port liner - both 3" bentish - P 15" 5 3/4" : Star liner - P 15" 5 3/4" : 16"*
Material of Crank shaft *I. steel* Identification Mark on Do. *3183 N.W.E.* Material of Thrust shaft *O.H. steel* Identification Mark on Do. *3616 N.J.A.W.*
Material of Tunnel shafts *O.H. steel* Identification Marks on Do. *3616 N.J.A.W.* Material of Screw shafts *O.H. steel* Identification Marks on Do. *3616 N.J.A.W.*
Material of Steam Pipes *Lap welded wrought iron* Test pressure *540 pounds per sq"*

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 *yes* If so, state name of vessel *Standard "C" type.*

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

*The material and workmanship is good.
The machinery has been constructed under special survey and is eligible in my opinion for classification and the record + LMC 9, 18.*

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 9, 18 F.D.

25-9-18 *GRK*

The amount of Entry Fee ... £
Special ... £ *69*
Donkey Boiler Fee ... £
Travelling Expenses (if any) £

When applied for,
13 SEP 1918

When received,
29.9.18

2.10.18

E. S. Davis

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

FRI 27 SEP 1918

N. L. M. 9. 18

MACHINERY CERTIFICATE
WRITTEN



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Foundation