

REPORT ON MACHINERY.

No. 26940

Ind. reg. 11: 9743

Received at London Office

MAY 1917

Date of writing Report 21st Mar 1917 When handed in at Local Office 24th Mar 1917 Port of Sunderland
 No. in Survey held at Sunderland Date, First Survey 13 June '16 Last Survey 7th May, 1917
 Reg. Book. 1 Upon the Machinery of the S.S. "Fiscus" (Number of Visits 48)
 Master Built at Stockton By whom built Craig Taylor & Co. Ltd When built 1917
 Engines made at Sunderland By whom made North Eastern Marine Eng. Co. Ltd When made 1917
 Boilers made at " By whom made " when made 1917
 Registered Horse Power Owners W. H. Leaper Port belonging to Cardiff
 Nom. Horse Power as per Section 28 361 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 26", 42 1/2", 69 1/2" Length of Stroke 45" Revs. per minute 62 Dia. of Screw shaft as per rule 14.32 Material of iron
 as fitted 14 3/4 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 Yes If two
 liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 4'-11"
 Dia. of Tunnel shaft as per rule 12.72 Dia. of Crank shaft journals as per rule 13.35 Dia. of Crank pin 13 1/2" Size of Crank webs 20 3/4" X 8 1/4" Dia. of thrust shaft under
 collars 13 1/2" Dia. of screw 17'-6" Pitch of Screw 18'-0" No. of Blades 4 State whether moveable no Total surface 93 sq ft
 No. of Feed pumps 2 Diameter of ditto 3 3/4" Stroke 21" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 21" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps 7 1/2" X 9 1/2" X 10 1/2" & 7 1/2" X 5" X 6" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 3 of 3 1/2" In Holds, &c. No 1 & 3 holds - 2 @ 9 1/2" : No 2 hold
2 @ 4" : No 4 hold 3 @ 3 1/2" : Tunnel with one @ 3 1/2"
 No. of Bilge Injections 1 sizes 5 1/2" Connected to condenser, or to circulating pump pump 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 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 none How are they protected ✓
 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
 Dates of examination of completion of fitting of Sea Connections 24.1.17 of Stern Tube 27/2/17 Screw shaft and Propeller 27/2/17
 Is the Screw Shaft Tunnel watertight see hull Rpt Is it fitted with a watertight door yes worked from top platform

BOILERS, &c.—(Letter for record (7) Manufacturers of Steel J. Spencer & Sons
 Total Heating Surface of Boilers 5700 Is Forced Draft fitted No No. and Description of Boilers 2 Single-ended
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 29/11/16 No. of Certificate 3373
 Can each boiler be worked separately Yes Area of fire grate in each boiler 65 sq ft No. and Description of Safety Valves to
 each boiler 2 direct spring Area of each valve 7.06 Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 25" Mean dia. of boilers 16'-6 1/2" 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 d. r. c.
 long. seams E. T. d. c. Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 10 1/16" Lap of plates or width of butt straps 20 1/2"
 Per centages of strength of longitudinal joint 86.7 Working pressure of shell by rules 180 lbs Size of manhole in shell 16" X 12"
 plate 86.33
 Size of compensating ring flanged No. and Description of Furnaces in each boiler 3 Dighton Material Steel Outside diameter 50 1/2"
 Length of plain part top Thickness of plates crown 3 1/4" Description of longitudinal joint welded No. of strengthening rings ✓
 bottom ✓ Working pressure of furnace by the rules 180.7 lbs Combustion chamber plates: Material Steel Thickness: Sides 13 1/16" Back 25 1/32" Top 13 1/16" Bottom 1"
 Pitch of stays to ditto: Sides 1 3/4" X 8 3/4" Back 1 1/4" X 10 1/8" Top 1 3/4" X 8 3/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 181 lbs
 Material of stays Iron Diameter at smallest part 2.79 Area supported by each stay 116 Working pressure by rules 180.3 lbs End plates in steam space:
 Material Steel Thickness 1 1/32" Pitch of stays 24" X 23 5/8" How are stays secured d. n. & w Working pressure by rules 180 lbs Material of stays Steel
 Diameter at smallest part 9.96 Area supported by each stay 567 Working pressure by rules 182 lbs Material of Front plates at bottom Steel
 Thickness 3/4" Material of Lower back plate Steel Thickness 1 5/16" Greatest pitch of stays 14 3/4" X 10 5/8" Working pressure of plate by rules 183 lbs
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" X 4 3/4" Material of tube plates Steel Thickness: Front 3/4" Back 3/4" Mean pitch of stays 10.55"
 Pitch across wide water spaces 14 1/2" Working pressures by rules 181 lbs Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 8 5/8" X 2 1/4" Length as per rule 32" Distance apart 13 1/4" Number and pitch of stays in each 2 of 8 3/4"
 Working pressure by rules 180.5 lbs Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked
 separately ✓ Diameter ✓ Length ✓ Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ Diam. of rivet
 holes ✓ Pitch of rivets ✓ Working pressure of shell by rules ✓ Diameter of flue ✓ Material of flue plates ✓ Thickness ✓
 If stiffened with rings ✓ Distance between rings ✓ Working pressure by rules ✓ End plates: Thickness ✓ How stayed ✓
 Working pressure of end plates ✓ Area of safety valves to superheater ✓ Are they fitted with easing gear ✓

W. WEB-FRAMES " No. of WEB-FRAMES " WEB-FRAMES " No. of Size of F BRACKET PL Web Frames BULKHEAD W.T.BULKHEAD COLLISION PARTITION LONGITUDINAL STRAKE FLAT PLATE KEEL (U Bar Keel, state GARBOARD OR State actual thickness in way of Double Bottom. THICKNESS OF CLEAR OF LONG DO. OF STR. DBLG. OF Flat " She Length and POOP SIDES SHORT BRID FORECASTLE Upper I Stringer Second Stringer FRAMES REVERSE LOWER MA Bowsprit Topmasts, Rigging, M Sails.

IS A DONKEY BOILER FITTED? *Yes*
SPARE GEAR. State the articles supplied:—
Two top end & 2 bottom end bolts, 2 main bearing bolts, one set of feed & bilge pump valves, one set of coupling bolts, a quantity of assorted bolts nuts & iron, propeller shaft propeller and minor parts.

The foregoing is a correct description,
FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD

Geo. D. Keer Manufacturer.
Manager.

Dates of Survey while building { During progress of work in shops - - 1916. Jun 13. Jul 14. 28. Aug 21. Sep 25. Oct 13. 30. Nov 29. Dec 12. 16. 27. 29. Jan 5. 18. 15. 22. 23. 26. 29. 30. Feb 5. 7. 14. 19. 21. 27. 28. Mar 6. 7. 8. 10. At Mdb: - 1917. Jan 24. 29. Feb 12. Mar 21. 30. Apr 19. 22. May 1. 3. 5. 7. Total No. of visits (32 + 11) Is the approved plan of main boiler forwarded herewith *Yes*

Dates of Examination of principal parts—Cylinders 15/1/17 Slides 29/12/16 Covers 15/1/17 Pistons 22/12/17 Rods 5/2/17 Connecting rods 5/2/17 Crank shaft 29/1/17 Thrust shaft 23/1/17 Tunnel shafts 14/2/17 Screw shaft 5/2/17 Propeller 27/2/17 Stern tube 30/1/17 Steam pipes tested 28/3/17 Engine and boiler seatings 27/2/17 Engines holding down bolts 7/3/17 Completion of pumping arrangements 1.5.17 Boilers fixed 7/3/17 Engines tried under steam 10/3/17 Main boiler safety valves adjusted 10/3/17 Thickness of adjusting washers P.F. 3/8" A. 3/8" S.F. 1/4" A. 1/4" Material of Crank shaft *Steel* Identification Mark on Do. 29/1/17 Material of Thrust shaft *Steel* Identification Mark on Do. 29/1/17 Material of Tunnel shafts *Steel* Identification Marks on Do. 14/2/17 Material of Screw shafts *Steel* Identification Marks on Do. 14/2/17 Material of Steam Pipes *Loop welded steel* Test pressure 540 lbs ✓ 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 machinery of this vessel has been built under special survey, the materials used are good and the workmanship is satisfactory, it has been properly fitted on board and secured, and the engines have been tried under steam. In my opinion this vessel is eligible for the record of L.M.C. 5.17 when the donkey boiler has been secured & its valves adjusted, tunnel door fitted and the pumping arrangements completed.

Donkey Boiler secured in place and safety valves adjusted, tunnel door fitted, pumping arrangements completed, examined, and all found satisfactory.
This vessel is fitted with Electric Light and "Wireless"

It is submitted that this vessel is eligible for THE RECORD. + LMC 5.17. 12.5.17

The amount of Entry Fee ... £ 3 : : When applied for, Special ... £ 38 : : 24 MAR 1917 Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) £ : : 23/4/19 advised to Mdb. 5mb.

Committee's Minute : 25 MAY 1917
Assigned + LMC 5.17

Charles Cooper 18/5/17
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.