

REPORT ON MACHINERY.

No. 27088

Date of writing Report 5th Nov 17 When handed in at Local Office 4th Nov 17 Port of SUNDERLAND
 No. in Survey held at SUNDERLAND Date First Survey 12 Feb '15 Last Survey 5th Nov 1917
 Reg. Book. 48 Upon the Machinery of the S.S. Capelcastle Gross Tons 3872
 Master Agnew Built at Sunderland By whom built R. Thompson & Son Ltd Net Tons 2253
 Engines made at Sunderland By whom made North Eastern Marine Eng Co Ltd When built 1917
 Boilers made at " By whom made " when made 1917
 Registered Horse Power " Owners A Capel & Co (South Wales) Ltd Port belonging to Newport, Mon
 Nom. Horse Power as per Section 28 341 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 25", 42", 68" Length of Stroke 45" Revs. per minute 63 Dia. of Screw shaft as per rule 14.05 Material of iron
 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 Yes 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 Yes Length of stern bush 4'-11 1/2"
 Dia. of Tunnel shaft as per rule 12.45 Dia. of Crank shaft journals as per rule 13.08 Dia. of Crank pin 13 1/4" Size of Crank webs 20" X 8 1/2" Dia. of thrust shaft under
 collars 13 1/4" Dia. of screw 17'-3" Pitch of Screw 17'-9" No. of Blades 4 State whether moveable No Total surface 90 sq 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 4" Stroke 24" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps 6" X 4" X 6" & 7" X 9" X 9" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 3 of 3 1/2" In Holds, &c. 2 of 3 1/2" in each hold & 1 of
3 1/2" in tunnel well.
 No. of Bilge Injections 1 sizes 4 1/2" Connected to condenser, or to circulating pump pumps 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 Yes
 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 29/8/17 of Stern Tube 3/10/17 Screw shaft and Propeller 5/10/17
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top platform

BOILERS, &c.—(Letter for record 7) Manufacturers of Steel J. & S. Pinner & Sons
 Total Heating Surface of Boilers 5302 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 23/3/17 No. of Certificate 3393
 Can each boiler be worked separately Yes Area of fire grate in each boiler 61.5 sq ft No. and Description of Safety Valves to
 each boiler 2 direct spring Area of each valve 4.06 sq in 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 22" Mean dia. of boilers 16'-3 3/4" Length 11'-0" Material of shell plates Steel
 Thickness 1 1/32" Range of tensile strength 2978-33 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams a. r. lap
 long. seams E. r. d. butt Diameter of rivet holes in long. seams 1 1/32" Pitch of rivets 9 3/4" Lap of plates or width of butt straps 20 1/4"
 Per centages of strength of longitudinal joint: rivets 88.8 plate 86.21 Working pressure of shell by rules 181 lbs Size of manhole in shell 16" X 12"
 Size of compensating ring flanged No. and Description of Furnaces in each boiler 4 plain Material Steel Outside diameter 41 1/4"
 Length of plain part top 80 3/4" Thickness of plates bottom 1 1/4" Description of longitudinal joint welded No. of strengthening rings Yes
 Working pressure of furnace by the rules 180.5 lbs Combustion chamber plates: Material Steel Thickness: Sides 2 1/2" Back 2 1/2" Top 2 1/2" Bottom 1 5/8"
 Pitch of stays to ditto: Sides 12 3/4" X 8 3/8" Back 12" X 11" Top 12 3/4" X 8 3/8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 181 lbs
 Material of stays Steel Diameter at smallest part 3 1/2" Area supported by each stay 132 Working pressure by rules 180 lbs End plates in steam space:
 Material Steel Thickness 1 1/2" Pitch of stays 24" X 23 1/2" How are stays secured a. n. & w. Working pressure by rules 181 lbs Material of stays Steel
 Diameter at smallest part 9.62 Area supported by each stay 554 Working pressure by rules 80 lbs Material of Front plates at bottom Steel
 Thickness 3/4" Material of Lower back plate Steel Thickness 1 5/8" Greatest pitch of stays 14 1/2" X 11" Working pressure of plate by rules 183 lbs
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" X 4 5/8" Material of tube plates Steel Thickness: Front 3/4" Back 3/4" Mean pitch of stays 10.28"
 Pitch across wide water spaces 14 1/2" Working pressures by rules 193 lbs Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 8 3/8" X 2" Length as per rule 30" Distance apart 12 3/4" Number and pitch of stays in each 2 of 8 3/8"
 Working pressure by rules 181 lbs Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked
 separately Yes Diameter Yes Length Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet
 holes Yes Pitch of rivets Yes Working pressure of shell by rules Yes Diameter of flue Yes Material of flue plates Yes Thickness Yes
 If stiffened with rings Yes Distance between rings Yes Working pressure by rules Yes End plates: Thickness Yes How stayed Yes
 Working pressure of end plates Yes Area of safety valves to superheater Yes Are they fitted with easing gear Yes

W409-0104

IS A DONKEY BOILER FITTED?

Yes

If so, is a report note forwarded?

Yes

SPARE GEAR. State the articles supplied:-

Two top & 2 bottom end bolts, 2 main bearing bolts, 1 set of coupling bolts, 1 set of feed & bilge pump valves, a quantity of assorted bolts nuts & iron, propeller shaft, propeller & minor parts.

The foregoing is a correct description,

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD

Geo. D. Weis

Manufacturer.

Manager.

Dates of Survey while building { During progress of work in shops -- 1915 Feb 12. 25 Mar 11. 19 Apr 16 Nov 30 Dec 2. 24 Jan 25 Feb 2. 29 Mar 16 Apr 6. 26 Dec 11 Jan 9. 21
During erection on board vessel -- Feb 8. 26 Mar 21. 23 Apr 17. 19. 24. 28 May 1. 14. 7. 10. 16. 18. 21. 22 June 1. 6. 8. 11. 12. 29 July 2. 4. 6. 12 Aug 1. 29. 31
Total No. of visits Sep 12. Oct 3. 5. 12. 13. 17. 18. 29 Nov 5. (56) Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts--Cylinders 18/5/17 Slides 4/5/17 Covers 4/5/17 Pistons 6/6/17 Rods 5/4/17
Connecting rods 5/4/17 Crank shaft 21/5/17 Thrust shaft 24/4/17 Tunnel shafts 6/6/17 Screw shaft 12/7/17 Propeller 4/7/17
Stern tube 12/7/17 Steam pipes tested 13/10/17 Engine and boiler seatings 29/8/17 Engines holding down bolts 12/10/17
Completion of pumping arrangements 5/11/17 Boilers fixed 12/10/17 Engines tried under steam 18/10/17
Main boiler safety valves adjusted 18/10/17 Thickness of adjusting washers P. F. 1/4" A. 1 3/32" S. F. 1 3/32" A. 7/32
Material of Crank shaft Steel Identification Mark on Do. 21/5/17 Material of Thrust shaft Steel Identification Mark on Do. 1/5/17
Material of Tunnel shafts Steel Identification Marks on Do. 11/6/17 Material of Screw shafts Iron Identification Marks on Do. 1/8/17
Material of Steam Pipes Loop welded steel Test pressure 548 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. 11.17.

It is submitted that this vessel is eligible for THE RECORD. + LMC 11.17.

The amount of Entry Fee ... £ 3 : : When applied for, - 9 NOV 1917
Special ... £ 37 : 1 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : : When received, 30-11-1917

Committee's Minute

Assigned

TUE. NOV. 13 1917.

+ LMC 11.17.

Charles Cooper

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping



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