

REPORT ON MACHINERY.

No. 63138

Received at London Office

Date of writing Report 14th Oct 1912 When handed in at Local Office 15th Oct 1912 Port of NEWCASTLE-ON-TYNE
 No. in Survey held at Newcastle Date, First Survey 17th May Last Survey 3rd Oct 1912
 Reg. Book. 17 on the Machinery of the S.S. "Karpat" (Number of Visits 38)
 Master Built at Newcastle By whom built W. Dobson & Co Tons { Gross 4292
 Engines made at Newcastle By whom made North Eastern Marine Eng. Co. when made 1912 Net 2675
 Boilers made at " By whom made " when made 1912
 Registered Horse Power Owners Hungarian Levant S.S. Co. Ltd Port belonging to Fiume
 When built 1912
 Nom. Horse Power as per Section 28 343 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Tripple No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 24", 39" & 66" Length of Stroke 45" Revs. per minute 70 Dia. of Screw shaft as per rule 13.79 Material of screw shaft 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 5'-6"
 Dia. of Tunnel shaft as per rule 12.05 Dia. of Crank shaft journals as per rule 12.65 Dia. of Crank pin 13" Size of Crank webs 24" x 8" Dia. of thrust shaft under
 collars 13" Dia. of screw 17'-3" Pitch of Screw 17'-3" No. of Blades 4 State whether moveable no Total surface 92 sq ft
 No. of Feed pumps 2 Diameter of ditto 6" Stroke 21" 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 10 1/2" x 12 1/2" x 21" & 7 1/2" x 5" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 4 of 3 1/2" In Holds, &c. 2 of 3 1/2" in each
 No. of Bilge Injections 1 sizes 7" Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size 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 25/7/12 of Stern Tube 25/7/12 Screw shaft and Propeller 14/9/12
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top platform

BOILERS, &c.—(Letter for record 15) Manufacturers of Steel J. & S. Spence & Sons
 Total Heating Surface of Boilers 5658 Is Forced Draft fitted no No. and Description of Boilers 3 Single-ended
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 27/4/12 No. of Certificate 8367 & 8369
 Can each boiler be worked separately Yes Area of fire grate in each boiler 50 sq ft No. and Description of Safety Valves to
 each boiler 2 Direct spring Area of each valve 7.07 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 18" Mean dia. of boilers 14'-0 3/4" Length 10'-6" Material of shell plates steel
 Thickness 1/8" Range of tensile strength 28 3/4-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams d.r. lap
 long. seams E. r. d. butt Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 3/4" Lap of plates or width of butt straps 18 3/8"
 Per centages of strength of longitudinal joint rivets 92.8 Working pressure of shell by rules 183.4 lbs Size of manhole in shell 16" x 12"
 plate 85.7 Size of compensating ring flanged No. and Description of Furnaces in each boiler 3 Horisons Material steel Outside diameter 43"
 Length of plain part top Thickness of plates crown 1 1/32 Description of longitudinal joint welded No. of strengthening rings Yes
 bottom bottom Working pressure of furnace by the rules 190 lbs Combustion chamber plates: Material steel Thickness: Sides 2 3/32" Back 2 3/32" Top 2 3/32" Bottom 7/8"
 Pitch of stays to ditto: Sides 9 3/8" x 10 1/2" Back 9 3/8" x 10 1/2" Top 9 3/8" x 10 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180.5 lbs
 Material of stays steel Diameter at smallest part 2.03 Area supported by each stay 48.4 Working pressure by rules 185 lbs End plates in steam space:
 Material steel Thickness 1 3/8" Pitch of stays 24" x 19 1/8" How are stays secured d.n.w. Working pressure by rules 185 lbs Material of stays steel
 Diameter at smallest part 8.29 Area supported by each stay 477 Working pressure by rules 81 lbs Material of Front plates at bottom steel
 Thickness 1 Material of Lower back plate steel Thickness 1 5/16" Greatest pitch of stays 14 1/2" x 10 1/2" Working pressure of plate by rules 190 lbs
 Diameter of tubes 3 1/4" Pitch of tubes 4 3/8" x 4 1/2" Material of tube plates steel Thickness: Front 1" Back 3/4" Mean pitch of stays 9" x 8 3/4"
 Pitch across wide water spaces 14 1/2" Working pressures by rules 183 lbs Girders to Chamber tops: Material steel Depth and
 thickness of girder at centre 8 3/8" x 2" Length as per rule 32" Distance apart 10 1/2" Number and pitch of stays in each 2 of 9 3/8"
 Working pressure by rules 182 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

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VERTICAL DONKEY BOILER— Manufacturers of Steel

No.	Description				
Made at	By whom made		When made		Where fixed
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area	Description of Safety
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted		Date of adjustment
If fitted with easing gear	If steam from main boilers can enter the donkey boiler		Dia. of donkey boiler		Length
Material of shell plates	Thickness	Range of tensile strength	Descrip. of riveting long. seams		
Dia. of rivet holes	Whether punched or drilled	Pitch of rivets	Lap of plating	Per centage of strength of joint	Rivets Plates
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.	Dia. of stays	
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates	Description of joint	
Working pressure of furnace by rules	Thickness of furnace crown plates	Radius of do.	Stayed by		
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:— 2 top & 2 bottom end bolts, 2 main bearing bolts, 1 set of coupling bolts, 1 set of feed & bilge pump valves, 1 set of piston springs, a quantity of assorted bolts nuts & iron, propeller, propeller shaft 13 crank shaft, top & bottom end bushes, eccentric shafts & minor parts.

The foregoing is a correct description,
NORTH EASTERN MARINE ENGINEERING Co., LTD.

Manufacturer.		1912	
Dates of Survey while building	During progress of work in shops	Secretary.	May. 17. 20. 21. 29. 30 Jun. 11. Jul. 1. 2. 11. 15. 18. 19. 22. 25. 26. 30 Aug. 1. 2. 7. 8. 14. 16.
During erection on board vessel	19. 21. 23. 26. 29. 30. Sep. 2. 5. 10. 11. 18. 23. 25. 28. Oct. 2. 3		
Total No. of visits	38	Is the approved plan of main boiler forwarded herewith <input checked="" type="checkbox"/>	

Dates of Examination of principal parts—Cylinders 1/8/12 Slides 10/9/12 Covers 18/7/12 Pistons 10/9/12 Rods 10/9/12
Connecting rods 2/5/12 Crank shaft 26/7/12 Thrust shaft 17/5/12 Tunnel shafts 1/7/12 Screw shaft 29/5/12 Propeller 30/8/12
Stern tube 2/7/12 Steam pipes tested 21/8 & 25/9/12 Engine and boiler seatings 25/7/12 Engines holding down bolts 23/9/12
Completion of pumping arrangements 28/9/12 Boilers fixed 23/9/12 Engines tried under steam 28/9/12
Main boiler safety valves adjusted 28/9/12 Thickness of adjusting washers Port P 3/8" 3/4" Centre P 3/8" 3/4" Stb P 5/8" 3/4"
Material of Crank shaft Steel Identification Mark on Do. 8/8/12 Steel Material of Thrust shaft Steel Identification Mark on Do. 29/5/12 Steel
Material of Tunnel shafts Steel Identification Marks on Do. 15/7/12 Steel Material of Screw shafts Iron Identification Marks on Do. 11/6/12 Steel
Material of Steam Pipes Solid drawn copper Test pressure 360 lbs ✓

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 seen running under full power. In my opinion this vessel is eligible for the record of L.M.C. 10.12.

It is submitted that
this vessel is eligible for
THE RECORD + L.M.C. 10.12.

J.W.D. L.H.H.
18/10/12

The amount of Entry Fee	£ 3 :	When applied for	OCT 15 1912
Special	£ 37. 3 :	When received,	21. 10. 12
Donkey Boiler Fee	£ :		
Travelling Expenses (if any)	£ :		

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

Committee's Minute

FRI. OCT. 18. 1912

Assigned

+ L.M.C. 10.12

MACHINERY CERTIFICATE
WRITTEN



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Foundation