

# REPORT ON MACHINERY.

No. 14972

Received at London Office MON. AUG. 10. 1914

When handed in at Local Office 7/8/14 in Port of WEST HARTLEPOOL

Survey held at West Hartlepool Date, First Survey 19th Feb/14 Last Survey 25th July 1914

on the steel screw steamer HAMBLETON RANGE

Builder J. H. Canham Built at West Hartlepool By whom built James & Sons & Co. Ltd. When built 1914

Machinery made at Hartlepool By whom made Richardson, Westgarth & Co. Ltd. when made 1914

Registered Horse Power Owners Neptune Steam Navigation Co. Ltd. Port belonging to WEST HARTLEPOOL

Horse Power as per Section 28 341 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

Engines, &c.—Description of Engines Triple Expansion (inverted) No. of Cylinders Three No. of Cranks Three

of Cylinders 25-40-64 Length of Stroke 45 Revs. per minute 65 Dia. of Screw shaft as per rule 13.82 Material of steel

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

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

shafts are fitted, is the shaft lapped or protected between the liners Length of stern bush 4-10

Dia. of Tunnel shaft as per rule 12.36 Dia. of Crank shaft journals as per rule 12.98 Dia. of Crank pin 13 1/8 Size of Crank webs 20 3/8 x 8 Dia. of thrust shaft under

of Feed pumps no Diameter of ditto 3 1/4 Stroke 24 Can one be overhauled while the other is at work yes

of Bilge pumps no Diameter of ditto 3 3/4 Stroke 24 Can one be overhauled while the other is at work yes

of Donkey Engines no Sizes of Pumps General Service 4x6 duplex No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room four 3 1/2 dia one 2 1/2 min. direct. In Holds, &c. Two 3 1/2 in each hold. 2 1/2 Tunnel well

of Bilge Injections one size 5 Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size yes 3 1/2

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

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 8/6/14 of Stern Tube 26/4/14 Screw shaft and Propeller 26/6/14

the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top platform

MILERS, &c.—(Letter for record S) Manufacturers of Steel Messrs. Dehuers & Co., Rotterdam, & Lush & Co.

Total Heating Surface of Boilers 5450 Is Forced Draft fitted no No. and Description of Boilers Two High Sided Cyl. & Horizontal

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 29/5/14 No. of Certificate 3368

can each boiler be worked separately yes Area of fire grate in each boiler 59.1 No. and Description of Safety Valves to

each boiler no, direct spring Area of each valve 8.29 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 16-6 Length 11-0 Material of shell plates steel

thickness 1 1/32 Range of tensile strength 296-324 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams Lap 5 R.

of longitudinal joint rivets 89.6 % Working pressure of shell by rules 180 lbs Size of manhole in shell 15 x 16 1/2

of compensating ring 8 1/4 x 1 1/2 No. and Description of Furnaces in each boiler Three Bull Material steel Outside diameter 48 1/8

length of plain part top 19 bottom 32 Thickness of plates crown 19 bottom 32 Description of longitudinal joint Weld. No. of strengthening rings

working pressure of furnace by the rules 195 lbs Combustion chamber plates: Material steel Thickness: Sides 19 Back 5 Top 19 Bottom 19

pitch of stays to ditto: Sides 1/4 x 7/8 Back 1/4 x 8/8 Top 1/4 x 7/8 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 211 lbs

material of stays steel Diameter at smallest part 1 3/8 Area supported by each stay 8 1/4 x 7 1/2 Working pressure by rules 185.5 lbs End plates in steam space:

material steel Thickness 1 3/16 Pitch of stays 16 1/2 x 19 1/2 How are stays secured 5N + 11 Working pressure by rules 204.5 lbs Material of stays steel

diameter at smallest part 3-0 Area supported by each stay 16 1/2 x 19 1/2 Working pressure by rules 234 lbs Material of Front plates at bottom steel

thickness 15/16 Material of Lower back plate steel Thickness 13/16 Greatest pitch of stays 13 1/2 x 8 1/4 Working pressure of plate by rules 182.5 lbs

diameter of tubes 3 1/2 Pitch of tubes 4 1/16 x 4 5/8 Material of tube plates steel Thickness: Front 1 1/32 x 15/16 Back 27/32 Mean pitch of stays 11.66

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 1/4 x 1 3/4 Length as per rule 32 3/4 Distance apart 4 1/8 Number and pitch of stays in each Three 1/4

Working pressure by rules 182.5 lbs Superheater or Steam chest; how connected to boiler 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

plates Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

strengthened 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

Lloyd's Register Foundation

IS A DONKEY BOILER FITTED? *yes.*

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

SPARE GEAR. State the articles supplied:— *Two each top End, Bottom End & Main Bearing Bolts one set of coupling Bolts. one set H.P. piston rings one feed wheel valve one safety valve one set feed pump valves, one set bilge pump valves. One propeller & propeller shaft. Half set Air pump valves, Half set of circulating pump valves. Assorted Bolts nuts & washers.*

The foregoing is a correct description,  
FOR RICHARDSONS, WESTGARTH & CO. LIMITED

*L.P. Hingitt*  
ASSISTANT GENERAL MANAGER

Manufacturer.

Dates of Survey while building: During progress of work in shops - 1914. Feb 19. 20. March 18. 19. 20. 23. 24. 27. 30. 31. April 2. 7. 16. 20. 23. 24. 27. May 1. 8. 11. 21. 22. 25. 29. June 3. 5. 8. 10. 11. 12. 15. 24. 26. July 7. 8. 9. 15. 23. 25.  
Total No. of visits *41.* Is the approved plan of main boiler forwarded herewith *yes.*

Dates of Examination of principal parts—Cylinders *16/4/14* Slides *25/5/14* Covers *25/5/14* Pistons *2/4/14* Rods *8/5/14*  
Connecting rods *16/4/14* Crank shaft *1/5/14* Thrust shaft *19/3/14* Tunnel shafts *23/4/14* Screw shaft *7/4/14* Propeller *8/6/14*  
Stern tube *11/5/14* Steam pipes tested *25/5/14* Engine and boiler seatings *7/7/14* Engines holding down bolts *7/7/14*  
Completion of pumping arrangements *9/7/14* Boilers fixed *15/7/14* Engines tried under steam *9/7/14*  
Main boiler safety valves adjusted *9/7/14* Thickness of adjusting washers  $\frac{7}{16}$   $\frac{3}{8}$   $\frac{13}{32}$   $\frac{3}{8}$   
Material of Crank shaft *steel* Identification Mark on Do. *(5569 8/8/14)* Material of Thrust shaft *steel* Identification Mark on Do. *(5569 7/7/14)*  
Material of Tunnel shafts *steel* Identification Marks on Do. *(5569 7/7/14)* Material of Screw shafts *steel* Identification Marks on Do. *(5569 11/4/14)*  
Material of Steam Pipes *Copper rolled drawn 5" bore 17.5 w.g.* 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 *yes.* If so, state name of vessel *Tanis - Boiler previously on Tanis*

General Remarks (State quality of workmanship, opinions as to class, &c.)  
*Engines only tested by Hyd pressure to 50 lbs + steam coils to 400 lbs marked.* 544 test 50 lbs 11/3/14

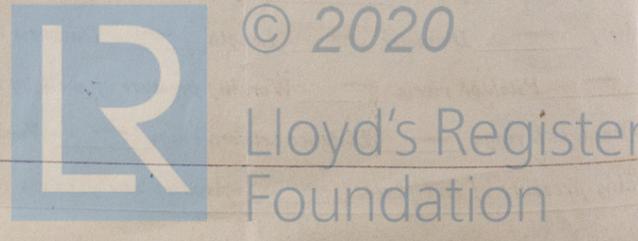
The Machinery of this Vessel has been built under Special Survey, the Material & workmanship found good. The Boilers and Steam Pipes have been tested by Hydraulic pressure in accordance with the requirements of the Rules, the whole of the Machinery worked well at the morning & the Safety Valves have been adjusted under steam to their working pressure & Survey Gear tested rendering this Vessel Eligible in my opinion to sign the Notation *\* LMC 7/14* in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 7/14

The amount of Entry Fee ... £ 3 : 0 :  
Special ... £ 57 : 1 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : :  
When applied for, *7/8/1914*  
When received, *11/8/14*

Committee's Minute *FRI. AUG. 14. 1914*  
Assigned *+ LMC 7.14*

*A. Hingitt*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping



WEST HARTLEPOOL

Certificate (if required) to be sent to

The Surveyors are requested not to write on or below the space for Committee's Minute.

MACHINERY CERTIFICATE WRITTEN