

REPORT ON MACHINERY

No. 2091

SAT. FEB. 7 - 1914

Received at London Office

Date of writing Report 24.1.1914 When handed in at Local Office 28.1.1914 Port of PHILADELPHIA
 No. in Survey held at PHILADELPHIA Date, First Survey 12.6.13 Last Survey Jan 7. 1914
 Reg. Book. 52 on the S.S. HAMPDEN (Number of Visits 28)
 Master E. E. Crowley Built at Camden By whom built New York SBC Tons Gross 5725.29
 Engines made at Camden By whom made do when made 1914.1
 Boilers made at Camden By whom made do when made 1914.1
 Registered Horse Power 357 Owners Conshohocken Steamship Co Port belonging to Boston
 Nom. Horse Power as per Section 28 357 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 24 1/4, 38 1/2, 6 1/4 Length of Stroke 45 Revs. per minute 70 Dia. of Screw shaft 13.62 Material of screw shaft Steel
 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
 the propeller boss yes If the liner is in more than one length are the joints burned no 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 fitted close If two
 liners are fitted, is the shaft lapped or protected between the liners no Length of stern bush 5.0 3/8
 Dia. of Tunnel shaft 12.8 Dia. of Crank shaft journals 12.8 Dia. of Crank pin 3 1/2 Size of Crank webs 24 x 8 1/2 Dia. of thrust shaft under
 rollers 13 1/2 Dia. of screw 16.6 Pitch of Screw 16.0 No. of Blades 4 State whether moveable yes Total surface 90 sq ft
 No. of Feed pumps 2 Diameter of ditto 4 Stroke 18 Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 4 1/2 Stroke 18 Can one be overhauled while the other is at work yes
 No. of Donkey Engines 3 Sizes of Pumps Duplex 10 x 7 1/2, 12 x 14, 12 No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room Three 3 1/2' dia. 3" In Holds, &c. two 3 1/2' each. peaks 1-3' each
 No. of Bilge Injections 1 sizes 1.0 Connected to condenser, or to circulating pump as a separate Donkey Suction fitted in Engine room & size
 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 below
 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 Bilge Suctions How are they protected heavy wood casing
 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 20.11.13 of Stern Tube 20.11.13 Screw shaft and Propeller 20.11.13
 Is the Screw Shaft Tunnel watertight no tunnel Is it fitted with a watertight door no worked from no

OILERS, &c.—(Letter for record T) Manufacturers of Steel Worth Bros. Conventville
 Total Heating Surface of Boilers 5838 sq ft Is Forced Draft fitted no No. and Description of Boilers 2 Mult. Cridge endia.
 Working Pressure 185 lbs Tested by hydraulic pressure to 278 lbs Date of test 31.10.13 No. of Certificate 57
 Can each boiler be worked separately yes Area of fire grate in each boiler 102 sq ft No. and Description of Safety Valves to
 each boiler 2. Mech. Spring Area of each valve 9.62 Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers 3.0 Mean dia. of boilers 14.3 Length 12.276 Material of shell plates Steel
 Thickness 1/32 Range of tensile strength 28.32 lb Are the shell plates welded or flanged no Descrip. of riveting: cir. seams 2-7. Laps
 long. seams D.B.S.T.R Diameter of rivet holes in long. seams 1 1/16 Pitch of rivets 10 1/8 Lap of plates or width of butt straps 22 3/4
 Per centages of strength of longitudinal joint rivets 84.7 Working pressure of shell by rules 200 lbs Size of manhole in shell 16 x 12
 Size of compensating ring 3 1/2 x 3 1/2 x 1 1/2 No. and Description of Furnaces in each boiler 4 Morrison Material Steel Outside diameter 57 1/8
 Length of plain part top 4 bottom 3 1/2 Thickness of plates crown 3/16 bottom 3/32 Description of longitudinal joint welded No. of strengthening rings none
 Working pressure of furnace by the rules 208 lbs Combustion chamber plates: Material Steel Thickness: Sides 7/16 Back 7/16 Top 9/32 Bottom 9/16
 Pitch of stays to ditto: Sides 7/8 x 6 5/8 Back 7/8 x 7 Top 8 x 6 5/8 If stays are fitted with nuts or riveted heads 7 nuts Working pressure by rules 222 1/2
 Material of stays Iron Diameter at smallest part 1 1/4 Area supported by each stay 42 sq in Working pressure by rules 204 lbs End plates in steam space:
 Material Steel Thickness 1/32 Pitch of stays 17 1/4 x 17 How are stays secured D.N. Working pressure by rules 226 lbs Material of stays Steel
 Diameter at smallest part 2 1/8 Area supported by each stay 293 sq in Working pressure by rules 230 Material of Front plates at bottom Steel
 Thickness 3/4 Material of Lower back plate Steel Thickness 5/8 Greatest pitch of stays 4 5/8 x 8 Working pressure of plate by rules 253 1/2
 Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates Steel Thickness: Front 3/4 Back 7/16 Mean pitch of stays beaded
 Pitch across wide water spaces 14 1/4 Working pressures by rules 223 1/4 Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 10 x 2 Length as per rule 39 3/4 Distance apart 8 Number and pitch of stays in each 5-6 5/8
 Working pressure by rules 224 lbs Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked
 separately no Diameter no Length no Thickness of shell plates no Material no Description of longitudinal joint no Diam. of rivet
 holes no Pitch of rivets no Working pressure of shell by rules no Diameter of flue no Material of flue plates no Thickness no
 If stiffened with rings no Distance between rings no Working pressure by rules no End plates: Thickness no How stayed no
 Working pressure of end plates no Area of safety valves to superheater no Are they fitted with easing gear no

IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Two propeller blades, 2 crossheads, 2 crank pins & main bearing bolts nuts. 1 set coupling bolts nuts. 1 set valve spindle braces. 1 set pump link braces. 1 set feed & bilge pump valves. 1 set of valves for each donkey pump. A quantity of bolts nuts & assorted iron.

The foregoing is a correct description,

New York Shipbuilding Company,

H. H. Lagom

Manufacturer.

Dates of Survey while building: During progress of work in shops -- *June 12. 25 July 2. 8. 17. 24 Aug 1. 12. 27. Sept 11. 15. 25. 29. Oct 9. 14. 27. 31. Nov 8. 11. 1913*
During erection on board vessel --- *Nov 20. Dec 1. 4. 9. 19. 26. 27. 1913. Jan 2. 7. 1914.*
Total No. of visits *28*

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

" " " donkey " " " *yes*

Dates of Examination of principal parts—Cylinders *17. 10. 13* Slides *17. 10. 13* Covers *17. 10. 13* Pistons *20. 11. 13* Rods *20. 11. 13*
Connecting rods *20. 11. 13* Crank shaft *11. 11. 13* Thrust shaft *8. 11. 13* Tunnel shafts — Screw shaft *17. 10. 13* Propeller *20. 11. 13*
Stern tube *20. 11. 13* Steam pipes tested *15. 12. 13* Engine and boiler seatings *31. 10. 13* Engines holding down bolts *19. 12. 13*
Completion of pumping arrangements *26. 12. 13* Boilers fixed *31. 10. 13* Engines tried under steam *27. 12. 13*
Main boiler safety valves adjusted *27. 12. 13* Thickness of adjusting washers *P. Boiler F 7/16 A 7/16. Ship Boiler F 3/8 A 9/16*
Material of Crank shaft *Steel* Identification Mark on Do. *1020 R.H.* Material of Thrust shaft *Steel* Identification Mark on Do. *1020 R.H.*
Material of Tunnel shafts — Identification Marks on Do. — Material of Screw shafts *Steel* Identification Marks on Do. *1020 R.H.*
Material of Steam Pipes *Solid drawn copper* Test pressure *400 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 constructed & fitted on board under Special Survey the workmanship is found to be good throughout. The machinery has been tried under steam & found to work well which in my opinion renders the vessel eligible for the record of +LMC 1-14 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD, + LMC 1. 14.

J.M.
J.W.D.
9/2/14
Robert Haig
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee ... \$ 15: 00: When applied for,
Special ... £ 289: 25: } 24. 1. 1914
Donkey Boiler Fee ... £ - : - : } not
Travelling Expenses (if any) £ 6: 75: } 26. 2. 1914

Committee's Minute TUE. FEB. 10. 1914
Assigned + LMC 1. 14.

PHILADELPHIA

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



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Foundation