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REPORT ON MACHINERY.

No. THU.NOV.14 1912

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Port of Cleveland, O. Received at London Office 19

o. in Book. Survey held at Ashtabula, O & Ecorse, Mich Date, first Survey May 23 Last Survey Oct 16 1912

(Number of Visits 22)

Supp on the S/S EDISON LIGHT

ter D. B. Smith. Built at Ashtabula, O. By whom built Great Lakes Engineering Works Tons Gross 2549 Net 1669 When built 1912

ines made at Ashtabula, O By whom made ditto when made 1912.

lers made at Toledo, O. By whom made The Maine Boiler Works Co. when made 1912

istered Horse Power ✓ Owners Boston & Virginia Transportation Co Port belonging to New York

n. Horse Power as per Section 28 274 ✓ Is Refrigerating Machinery fitted for cargo purposes no ✓ Is Electric Light fitted yes ✓

GINES, &c.—Description of Engines triple expansion ✓ No. of Cylinders 3 ✓ No. of Cranks 3 ✓

a. of Cylinders 21"-34½"-57" ✓ Length of Stroke 42" ✓ Revs. per minute 85 ✓ Dia. of Screw shaft as per rule 12.2 ✓ as fitted 12½" Material of screw shaft steel ✓

the screw shaft fitted with a continuous liner the whole length of the stern tube no ✓ Is the after end of the liner made water tight the propeller boss ✓ If the liner is in more than one length are the joints burned ✓ If the liner does not fit tightly at the part tween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓ If two ners are fitted, is the shaft lapped or protected between the liners yes ✓ Length of stern bush 4'-3" ✓

ia. of Tunnel shaft as per rule 10.7 ✓ as fitted none Dia. of Crank shaft journals as per rule 11.23 ✓ as fitted 11 7/16 Dia. of Crank pin 11½" ✓ Size of Crank webs 21"x8" Dia. of thrust shaft under llars 11½" ✓ Dia. of screw 13'-6" Pitch of Screw 14'-3" & 13'-6" ✓ No. of Blades 4 ✓ State whether moveable yes ✓ Total surface 64.4 sq ft

lo. of Feed pumps 1-7½x4½x10 duplex Diameter of ditto Stroke — ✓ Can one be overhauled while the other is at work yes ✓

lo. of Bilge pumps 2 ✓ Diameter of ditto 3½" ✓ Stroke 12" ✓ Can one be overhauled while the other is at work yes ✓

lo. of Donkey Engines 4 Sizes of Pumps Donkey 9x6x10 Fire 6x4x6 Ballast 10x12x10 Fresh water 3½x4x7 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 3½" centre 3" P+S ✓ In Holds, &c. No 1 hold 3" P+S & No 2 hold 3" P+S. ✓

lo. of Bilge Injections 1 ✓ sizes 6" ✓ Connected to ~~condenser~~ to circulating pump yes ✓ Is a separate Donkey Suction fitted in Engine room & size yes 4½" ✓

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 yes ✓

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 ~~wing tank suctions~~ ✓ How are they protected iron casings ✓

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 5 Oct of Stern Tube 5 Oct Screw shaft and Propeller 5 Oct.

Is the Screw Shaft Tunnel watertight none ✓ Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.—(Letter for record S ✓) Manufacturers of Steel Worth Bro ✓

Total Heating Surface of Boilers 3906 sq ft ✓ Is Forced Draft fitted yes ✓ No. and Description of Boilers 2 'Scotch' type ✓

Working Pressure 175 lbs. Tested by hydraulic pressure to 285 lbs. Date of test 5 Oct 6 Oct Sept. No. of Certificate 18.

Can each boiler be worked separately yes Area of fire grate in each boiler 41 sq ft No. and Description of Safety Valves to each boiler 2 spring loaded Area of each valve 7.07 sq in Pressure to which they are adjusted 175 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 6" Mean dia. of boilers 13'-0" Length 10'-11½" Material of shell plates steel

Thickness 1 1/16" Range of tensile strength 28/32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double long. seams double Diameter of rivet holes in long. seams 1 3/8 Pitch of rivets 6 13/16" Lap of plates or width of butt straps 10"

Per centages of strength of longitudinal joint rivets 86 ✓ plate 79.8 Working pressure of shell by rules 180 lbs Size of manhole in shell 15"x11"

Size of compensating ring 9½"x1" No. and Description of Furnaces in each boiler 2 Morrison Material steel Outside diameter 51"

Length of plain part top 6" bottom Gowlay Thickness of plates crown 37/64 bottom Description of longitudinal joint welded No. of strengthening rings ✓

Working pressure of furnace by the rules 178 Combustion chamber plates: Material steel Thickness: Sides 5/8 Back 5/8 Top 5/8 Bottom 5/8

Pitch of stays to ditto: Sides 7½" Back 7½" Top 7½" If stays are fitted with ~~nuts~~ riveted heads yes Working pressure by rules 178

Material of stays steel Diameter at smallest part 1.39 Area supported by each stay 64.9 Working pressure by rules 185 End plates in steam space:

Material steel Thickness 3/4"+9/16" Pitch of stays 15"x16" How are stays secured screwed + double nut Working pressure by rules 198 Material of stays steel

Diameter at smallest part 2 5/8" Area supported by each stay 240 sq in Working pressure by rules 212 Material of Front plates at bottom steel

Thickness 5/8 Material of Lower back plate steel Thickness 5/8+1/2" Greatest pitch of stays 11 3/4"x6 3/4" Working pressure of plate by rules 178

Diameter of tubes 2 3/4" Pitch of tubes 3 3/4" Material of tube plates steel Thickness: Front 3/4" Back 3/4" Mean pitch of stays 10.46"

Pitch across wide water spaces 13½" Working pressures by rules 178 lbs Girders to Chamber tops: Material steel Depth and

thickness of girder at centre 8½"x1½" Length as per rule 29" Distance apart 7½" Number and pitch of stays in each 3-7½"

Working pressure by rules 188 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 ✓

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W815-0140

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 Stayed by

Diameter of uptake Thickness of uptake plates Thickness of water tubes Dates of survey

SPARE GEAR. State the articles supplied :—

2 connecting rod top end wedges, 2 connecting rod bottom end bolts & nuts, 2 main bearing bolts, 1 set of coupling bolts, 1 set of feed & bilge pump valves, assorted nuts & bolts & iron bars, 2 propeller blades.

The foregoing is a correct description,

Manufacturer. A. Geo. Mattson Chief Engineer

Dates of Survey while building — During progress of work in shops: May 23 June 5, 11, 21. July 10, 13, 26 Aug 8, 23, 26, Sept 5, 6
During erection on board vessel: Sept 14, 18, 19, 24, Oct 3, 5, 11, 15, 16.
Total No. of visits 22

Is the approved plan of main boiler forwarded herewith No returned for 105 ✓
" " " donkey " " "

Dates of Examination of principal parts—Cylinders 23/8/12 Slides 23/8/12 Covers 23/8/12 Pistons 23/8/12 Rods 23/8/12
Connecting rods 23/8/12 Crank shaft 23/8/12 Thrust shaft 23/8/12 Tunnel shafts ✓ Screw shaft 23/8/12 Propeller 23/8/12
Stern tube 23/8/12 Steam pipes tested 14/9/12. Engine and boiler seatings 23/8/12 Engines holding down bolts 9/10/12
Completion of pumping arrangements 16/10/12 Boilers fixed 3/10/12 Engines tried under steam 12/10/12
Main boiler safety valves adjusted 12/10/12. ~~Distance between nuts~~ Thickness of ~~adjusting washers~~ Bolt P 7/16 S. 7/16
Material of Crank shaft steel Identification Mark on Do. F98 Material of Thrust shaft steel Identification Mark on Do. F98
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts steel Identification Marks on Do. F98.
Material of Steam Pipes Wrot Iron. ✓ Test pressure 350 lbs ✓

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery & boilers of this vessel have been built under Special Survey in accordance with the Rules & approved plans. The workmanship & material are good & the machinery & boilers are eligible, in my opinion, to receive the notation ✠ L.M.C. 10.12. & F.D. in the Register Book.

Certificate (if required) to be sent to Cleveland

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

It is submitted that this vessel is eligible for THE RECORD. ✠ L M C. 10. 12.

F.D. J.W.D. 14/10/12.

A.R.H.

The amount of Entry Fee..	£	$10.00
Special	£	168.50
Donkey Boiler Fee	£	✓
Travelling Expenses (if any)	£	44.15

When applied for, 31st. 10. 1912 A.H.
When received, 10/1/13 A.H.

John S. Heck
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
FRI. JAN. 17. 1913

Committee's Minute FRI. NOV. 15. 1912

Assigned ✠ L M C. 10. 12.

F.D.

MACHINERY CERTIFICATE WRITTEN. also 28/8/16