

REC'D NEW YORK AUG - 7 1920

Rpt. 4.

REPORT ON MACHINERY.

No. 3887

Date of writing Report 23rd July 1920 When handed in at Local Office 24th July 1920 Port of Philadelphia
No. in Survey held at Chester Date, First Survey 24th Feb 1920 Last Survey 22nd July 1920
Reg. Book. (Number of Visits 33)

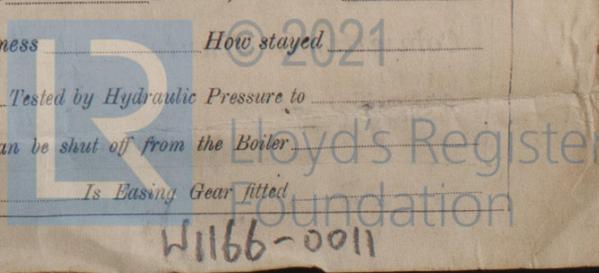
Master B. W. Danton Built at Chester By whom built Sun Shipbuilding Co Tons Gross 7055
Engines made at Chester By whom made Sun Shipbuilding Co Net 5058 When built 1920
Boilers made at Chester By whom made Sun Shipbuilding Co when made 1920
Registered Horse Power _____ when made 1920
Nom. Horse Power as per Section 28 612 Owners Atlantic Gulf & West Indies Steamship Line Port belonging to New York
Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 27" 45 1/2" 46" Length of Stroke 51" Revs. per minute 72 Dia. of Screw shaft as per rule 15.45 Material of Steel
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 5.4"
Dia. of Tunnel shaft as per rule 13.96 Dia. of Crank shaft journals as per rule 14.66 Dia. of Crank pin 15.5" Size of Crank webs 10 3/4 x 56" Dia. of thrust shaft under
collars 15" Dia. of screw 15" Pitch of Screw 16.6 No. of Blades 4 State whether moveable Yes Total surface 98 sq ft
No. of Feed pumps 2 Diameter of ditto 1 1/2" Stroke _____ Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto _____ Stroke _____ Can one be overhauled while the other is at work Yes
No. of Donkey Engines 2 Sizes of Pumps _____ No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room One Room 5'0 3/2" x 10'5" x 2'0 3/2" In Holds, &c. In hold 2'0 3/2" In pump room 1'0 3/2"
Large pump room 2'0 2 1/2" Cofferdam 2'0 3"
No. of Bilge Injections 1 sizes 10" Connected to condenser, or to circulating pump Yes 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 Yes
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 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
Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from _____

BOILERS, &c.—(Letter for record Yes) Manufacturers of Steel Lukens Steel & Iron Co
Total Heating Surface of Boilers 9195 sq ft Is Forced Draft fitted Yes No. and Description of Boilers 3 S. E. Scotch
Working Pressure 190 Tested by hydraulic pressure to 255 Date of test 4-5-20 No. of Certificate 451
Can each boiler be worked separately Yes Area of fire grate in each boiler 69 sq ft No. and Description of Safety Valves to
each boiler 3 1/2" Lewin Area of each valve 9.62 sq ft Pressure to which they are adjusted 190 Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers or woodwork 20" Mean dia. of boilers 15.11 1/2" Length 12.0 1/4" Material of shell plates Steel
Thickness 1 1/32" Range of tensile strength 60,000 to 70,000 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams DRL
long. seams TRDBS Diameter of rivet holes in long. seams 19/16" Pitch of rivets 9 1/16" Lap of plates or width of butt straps 22 3/4"
Per centages of strength of longitudinal joint 93.7 Working pressure of shell by rules 205 Size of manhole in shell 12" x 16"
Size of compensating ring Flanged No. and Description of Furnaces in each boiler 3 Morrison Material Steel Outside diameter 52 3/4"
Length of plain part top 1 1/2" Thickness of plates 9 1/8" Description of longitudinal joint Weld No. of strengthening rings Yes
Working pressure of furnace by the rules 192.7 Combustion chamber plates: Material Steel Thickness: Sides 2 1/32" Back 3/4" Top 2 1/32" Bottom 1"
Pitch of stays to ditto: Sides 8 1/2 x 6 1/2" Back 8 1/4 x 8 1/2" Top 8 1/4 x 8 1/2" If stays are fitted with nuts or riveted heads Both Working pressure by rules 190.9
Material of stays W1 Area at smallest part 1.997 Area supported by each stay 75.465 Working pressure by rules 195 End plates in steam space:
Material Steel Thickness 1 1/8" Pitch of stays 16 1/8 x 16" How are stays secured D nuts Working pressure by rules 210 Material of stays Steel
Area at smallest part 6.2126 Area supported by each stay 270 sq ft Working pressure by rules 239 Material of Front plates at bottom Steel
Thickness 1" Material of Lower back plate Steel Thickness 1 1/16" Greatest pitch of stays 13" Working pressure of plate by rules 248
Diameter of tubes 2 1/2" Pitch of tubes 3 3/4 x 3 1/2" Material of tube plates Steel Thickness: Front 1" Back 3/4" Mean pitch of stays 9"
Pitch across wide water spaces 13" Working pressures by rules 212 Girders to Chamber tops: Material Steel Depth and
thickness of girder at centre 10 1/2" x 2" Length as per rule 3.4" Distance apart 8 3/8" Number and pitch of stays in each 4 @ 8 1/2"
Working pressure by rules 247 Steam dome: description of joint to shell _____ % of strength of joint _____
Diameter _____ Thickness of shell plates _____ Material _____ Description of longitudinal joint _____ Diam. of rivet holes _____
Pitch of rivets _____ Working pressure of shell by rules _____ Crown plates _____ Thickness _____ How stayed _____

SUPERHEATER. Type None Date of Approval of Plan _____ Tested by Hydraulic Pressure to _____
Date of Test _____ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler _____
Diameter of Safety Valve _____ Pressure to which each is adjusted _____ Is Easing Gear fitted _____

If not, state whether, and when, one will be sent?



W1166-0011

DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *Yes*

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *Lead & armored cable and watertight fixtures*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Lead & armored cable*

What special protection has been provided for the cables near boiler casings *Lead & armored cable*

What special protection has been provided for the cables in engine room *Lead & armored cable*

How are cables carried through beams *Through holes* through bulkheads, &c. *Watertight tubes*

How are cables carried through decks *Through kick pipes twenty four inches long*

Are any cables run through coal bunkers *no* or cargo spaces *Yes* or spaces which may be used for carrying cargo, stores, or baggage *Yes*

If so, how are they protected *Shipped to deck every fourteen inches*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *Yes*

If so, how are the lamp fittings and cable terminals specially protected *Water tight fixtures*

Where are the main switches and fuses for these lights fitted *on switch board in Dynamo room*

If in the spaces, how are they specially protected *None installed*

Are any switches or fuses fitted in bunkers *no*

Cargo light cables, whether portable or permanently fixed *Portable* How fixed *to cargo clusters*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel

How are the returns from the lamps connected to the hull

Are all the joints with the hull in accessible positions

Is the installation supplied with a voltmeter *Yes* and with an amperemeter *Yes*, fixed *to switch board*

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and fuses fitted in positions not liable to the accumulation of petroleum vapour or gas *Yes*

Are any switches, fuses, or joints of cables fitted in the pump room or companion *no*

How are the lamps specially protected in places liable to the accumulation of vapour or gas *Water tight & gas proof*

The copper used is guaranteed to have a conductivity of not less than that of the Engineering Standards Committee's standard, and the wires are protected by tinning from the sulphur compounds present in the insulating material.

Insulation of cables is guaranteed to have a resistance of not less than *600* megohms per statute mile at 60° Fahrenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than 500 volts and while the cable is still immersed.

The foregoing statements are a correct description of the Electric Light installation fitted by us on this vessel and we declare that it is at this date in good order and safe working condition.

Robert J. Hass

Electrical Engineers

Date *23. 7. 20*

COMPASSES.

Distance between dynamo or electric motors and standard compass *250 ft.*

Distance between dynamo or electric motors and steering compass *250 ft.*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>35</i>	Amperes	<i>10</i>	feet from standard compass	<i>4</i>	feet from steering compass
A cable carrying	<i>2</i>	Amperes	<i>5</i>	feet from standard compass	<i>5</i>	feet from steering compass
A cable carrying		Amperes		feet from standard compass		feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power *Yes*

The maximum deviation due to electric currents, etc., was found to be *Nil* degrees on *all* course in the case of the standard compass and *Nil* degrees on *all* course in the case of the steering compass.

Robert J. Hass

Builder's Signature.

Date *23. 7. 20*

GENERAL REMARKS.

This installation has been well fitted aboard and proved satisfactory under trial

*Elec Lt
Rell
11/9/20*

J. Adamson

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Elec Lt

1920

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

Im. 11. 13. - Transfer.

