

Apr 19 1920

Rpt. 4.

REPORT ON MACHINERY

No. 3767

MON. MAY 3 1920

Date of writing Report 6 April 1920 When handed in at Local Office 10 April 1920 Port of Philadelphia
No. in Survey held at Chester Date, First Survey Feb 3rd 1919 Last Survey April 3rd 1920
Reg. Book. on the S.S. ATLANTIC SUN (Number of Visits 42)
Master John T. Olson Built at Chester By whom built Sun Shipbuilding Co Tons { Gross 6666
Engines made at Chester By whom made Sun Shipbuilding Co when made 1920 Net 4044
Boilers made at Chester By whom made Sun Shipbuilding Co when made 1920
Registered Horse Power Owners Sun Company Port belonging to Philadelphia
Nom. Horse Power as per Section 28 612 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. 48 1/2 76 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 16.5 Size of Crank webs 10 1/2 x 52 Dia. of thrust shaft under
collars 15 Dia. of screw 18 Pitch of Screw 16.6 No. of Blades 4 State whether moveable Yes Total surface 98.5
No. of Feed pumps 2 Diameter of ditto 12 x 8 Stroke 24 Can one be overhauled while the other is at work Yes
No. of Bilge pumps 3 Diameter of ditto See over Stroke See over Can one be overhauled while the other is at work Yes
No. of Donkey Engines over Sizes of Pumps See over No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 50 3/2" 10 5" 20 4" by tanks In Holds, &c. 20 3" from Cofferdam.
No. of Bilge Injections 1 sizes 10" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes
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 Engine off Is it fitted with a watertight floor Yes worked from Yes

BOILERS, &c.—(Letter for record 17) Manufacturers of Steel Lukens Steel & Iron Co
Total Heating Surface of Boilers 9195 Is Forced Draft fitted Yes No. and Description of Boilers 3 S.C. Scotch J.S.B.
Working Pressure 190 Tested by hydraulic pressure to 255 Date of test 24. 1. 20 No. of Certificate 416
Can each boiler be worked separately Yes Area of fire grate in each boiler 69.5 No. and Description of Safety Valves to
each boiler 3 1/2 Lwin Area of each valve 9.62 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 1/2 Material of shell plates Steel
Thickness 1 1/2 Range of tensile strength 60000 to 70000 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams DAL
long. seams TRDBS Diameter of rivet holes in long. seams 1 9/16 Pitch of rivets 9 7/16 Lap of plates or width of butt straps 27 3/4
Per centages of strength of longitudinal joint rivets 93.7 Working pressure of shell by rules 205 Size of manhole in shell 12 x 16
plate 84.2 Size of compensating ring Flanged No. and Description of Furnaces in each boiler 3 Morrison Material Steel Outside diameter 52 1/4
Length of plain part top Yes Thickness of plates crown 5/8 Description of longitudinal joint Weld No. of strengthening rings Yes
bottom Yes Working pressure of furnace by the rules 192.7 Combustion chamber plates: Material Steel Thickness: Sides 2 1/2 Back 3/4 Top 2 1/2 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 1/2 x 8 1/2 If stays are fitted with nuts or riveted heads Both Working pressure by rules 190.9
Material of stays W 1 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 6 7/8 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 240 Working pressure by rules 239 Material of Front plates at bottom Steel
Thickness 1 Material of Lower back plate Steel Thickness 1 1/8 Greatest pitch of stays 13 Working pressure of plate by rules 245
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 1/2 Number and pitch of stays in each 4 x 8 1/2
Working pressure by rules 247 Steam dome: description of joint to shell Yes % of strength of joint Yes
Diameter 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 Crown plates Yes Thickness Yes How stayed Yes

SUPERHEATER. Type Yes Date of Approval of Plan Yes Tested by Hydraulic Pressure to Yes
Date of Test Yes Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes
Diameter of Safety Valve Yes Pressure to which each is adjusted Yes Is Easing Gear fitted Yes

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:—

2 Connecting Rods: top & bottom end bolts & nuts: 2 Main bearing bolts: 1 set of Coupling bolts: 1 Tail shaft: 1 section crank shaft: 1 Eccentric: 1 set of Piston springs for each piston: 1 set of Top & bottom end braces: 1 set of valves for feed & bilge pumps: a quantity of assorted bolts & nuts. Iron & mild steel of various sizes

The foregoing is a correct description,

Robert. Haig

Manufacturer.

SUN SHIPBUILDING COMPANY
Dates { During progress of work in shops -- 1919 Feb 3rd to Feb 12/25 April 4th to 29 May 6th to 13 26 June 6th to 23 July 11th Aug 7th to 19 Sept 12th to 19 Oct 6th to 25 Nov 7th to 19
of Survey while building { During erection on board vessel --- 20th Dec 12th 1920 Jan 5th to 13 15 16 21 22 24 30 Feb 3rd to 9 Feb 1st to 5 12 19 25 30 31 April 3rd
Total No. of visits 42

Is the approved plan of main boiler forwarded herewith *No*

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 7-8-19 Slides 12-9-19 Covers 14-4-19 Pistons 26-8-19 Rods 19-8-19
Connecting rods 6-10-19 Crank shaft 7-8-19 Thrust shaft 15-1-20 Tunnel shafts 15-1-20 Screw shaft 15-1-20 Propeller 5-3-20
Stern tube 5-3-20 Steam pipes tested 19-3-20 Engine and boiler seatings 5-3-20 Engines holding down bolts 19-3-20
Completion of pumping arrangements 31-3-20 Boilers fixed 28-3-20 Engines tried under steam 31-3-20
Completion of fitting sea connections 5-3-20 Stern tube 5-3-20 Screw shaft and propeller 5-3-20
Main boiler safety valves adjusted 30-3-20 Thickness of adjusting washers *Lock nuts* ✓
Material of Crank shaft *Steel* ✓ Identification Mark on Do. *F.H.O. J.M.* Material of Thrust shaft *Steel* ✓ Identification Mark on Do. *J.M.*
Material of Tunnel shafts *Steel* ✓ Identification Marks on Do. *J.M.* Material of Screw shafts *Steel* ✓ Identification Marks on Do. *J.M.*
Material of Steam Pipes *Steel* ✓ Test pressure 650 lb

Is an installation fitted for burning oil fuel *Yes* ✓

Is the flash point of the oil to be used over 150°F. *Yes* ✓

Have the requirements of Section 49 of the Rules been complied with *Yes* ✓

Is this machinery duplicate of a previous case

If so, state name of vessel

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

Pumps: 2 Radiogets: Fuel 12x8x24 Amt Fuel 12x8x24 Donkey 14x10x12 Water service & Sanitary 6x5 3/4 x 6
Fresh water 5 1/2 x 4 3/4 x 5 Fuel oil transfer 10x6x10 Cargo bilge 6x5 3/4 x 6 Engine Room bilge 8x5 1/2 x 6 6x5 3/4 x 6
Pump Room bilge 6x5 3/4 x 6 Condensate 7 1/2 x 5 10 Fuel oil service 2 2 6x4x6 Evaporator 5 1/4 x 4 3/4 x 5
Cargo oil 2 2 16x14x18 ✓

The Machinery of this Vessel has been built under Special Survey in accordance with the approved plans. The Workmanship and materials all good

The machinery has been tried under steam and found satisfactory

It is submitted that the Vessel be eligible for a record of + L.M.C. 4-20. and to have notation fitted for oil fuel 4-20 Flash point above 150°F in the Register Book

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 4-20 F.D.

FITTED FOR OIL FUEL 4-20 F.P. ABOVE 150°F

The amount of Entry Fee ... \$15.00

Special ... \$253.00

Donkey Boiler Fee ... £

Travelling Expenses (if any) \$10.00

When applied for

When received

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York APR 20 1920

Assigned + L.M.C. 4-20

MACHINE
WRITTEN 3-5-20



© 2021

Lloyd's Register
Foundation