

Rpt. 4.

## REPORT ON MACHINERY.

No. 4213

MON. AUG. 22 1921

REC'D NEW YORK AUG 23 1921  
Date of writing Report 25 July 1921 When handed in at Local Office 29 July 1921 Port of Philadelphia  
No. in Survey held at Chester Pa Date, First Survey 10-12-20 Last Survey 25 July 1921  
Reg. Book. on the S.S. "J. N. PEW" (Number of Visits 46)

Master F. Ockelman Built at Chester Pa By whom built Sun Shipbuilding Co  
Engines made at Chester Pa By whom made Sun Shipbuilding Co when made 1921  
Boilers made at Chester Pa By whom made Sun Shipbuilding Co when made 1921  
Registered Horse Power Owners Sun Company Port belonging to Philadelphia  
Nom. Horse Power as per Section 28 620 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 24" 45 1/2" 76" Length of Stroke 51" Revs. per minute 72 Dia. of Screw shaft as per rule 15 1/4" Material of screw shaft 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 6' 0"  
Dia. of Tunnel shaft as per rule 14.2" as fitted 14.5" Dia. of Crank shaft journals as per rule 14.9" as fitted 15.35" Dia. of Crank pin 15 1/2" Size of Crank webs Dia. of thrust shaft under  
collars 15 1/4" Dia. of screw 18.2" Pitch of Screw 17" No. of Blades 4 State whether moveable Yes Total surface 89.4 sq ft  
No. of Feed pumps 2 Diameter of ditto 10" Stroke 10" Can one be overhauled while the other is at work Yes  
No. of Bilge pumps 2 Diameter of ditto 10" Stroke 10" 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 50 3/2 10 5" In Holds, &c. Fore hold 10 3" Main pump room 20 2 1/2"  
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 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  
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  
Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record 7) 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 200 Tested by hydraulic pressure to 300 Date of test 2-2-21 No. of Certificate 507  
Can each boiler be worked separately Yes Area of fire grate in each boiler 66 sq ft No. and Description of Safety Valves to  
each boiler 3 1/2" Lever Area of each valve 9.62 Pressure to which they are adjusted 200 Are they fitted with easing gear Yes  
Smallest distance between boilers or uptakes and bunkers or woodwork 20" Mean dia. of boilers 15.11 3/32 Length 12.0 3/8 Material of shell plates Steel  
Thickness 1 1/32 Range of tensile strength 60000 to 70000 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams DRL  
long. seams TRDBS Diameter of rivet holes in long. seams 1 9/16 Pitch of rivets 9 1/16 Lap of plates or width of butt straps 23 3/4  
Per centages of strength of longitudinal joint rivets 90% plate 84.2% Working pressure of shell by rules 214 Size of manhole in shell 12 x 16  
Size of compensating ring flange No. and Description of Furnaces in each boiler 3 Morrison Material Steel Outside diameter 52 1/4  
Length of plain part top 21 1/2 bottom 21 1/2 Thickness of plates crown 21 1/2 bottom 21 1/2 Description of longitudinal joint Weld No. of strengthening rings 1  
Working pressure of furnace by the rules 204 Combustion chamber plates: Material Steel Thickness: Sides 21 1/2 Back 3/4 Top 21 1/2 Bottom 1"  
Pitch of stays to ditto: Sides 8 1/2 x 6 Back 8 1/2 x 8 Top 8 1/2 x 8 1/2 If stays are fitted with nuts or riveted heads Both Working pressure by rules 203  
Material of stays W1 Area at smallest part 1.997 Area supported by each stay 71.187 Working pressure by rules 210 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 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 247  
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 10 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 x 8 1/2  
Working pressure by rules 237 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

UPERHEATER. Type 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

8600-1811X



IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR.

State the articles supplied:—

1 Propeller shaft. 2. Connecting rod bolts & nuts for top and bottom ends brasses: 1 set of coupling bolts: 1 set of piston springs for each piston fitted: 12 follower bolts: 8 valve stem studs: 8 piston rod studs: 1 Relief valve spring for each one fitted: 50 Condenser tubes: 1 Propeller hub and two spare blades: 1 Rod and rotor bucket for circulating pumps: 1 spare eccentric: 1 set of Crank brasses: 1 set of Crosshead brasses: a quantity of assorted bolts & nuts of various sizes 1 set of bilge relief valves and 2 main bearing bolts.

The foregoing is a correct description,

Wm. L. Hargreaves

Manufacturer.

Dates of Survey while building

During progress of work in shops --  
During erection on board vessel --  
Total No. of visits

1920. Dec 10. 16. 1921. Jan. 3. 6. 11. 18. 21. 24. 26. 27. 28. 31. Feb. 2. 8. 10. 11. 14. 17. 18. 21. 28. Mar. 6. 7. 12. 13. 14. 15. 20. 22. 23. Apr. 25. May 2. 6. 10. 25. 27. June 2. 7. 10. 16. 24. July 5. 11. 18. 21. 25.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 17-2-21 Slides 11-2-21 Covers 17-2-21 Pistons 21-2-21 Rods 21-2-21 Connecting rods 28-2-21 Crank shaft 8-2-21 Thrust shaft 4-4-21 Tunnel shafts 6-4-21 Screw shaft 6-4-21 Propeller 12-4-21 Stern tube 24-3-21 Steam pipes tested 24-6-21 Engine and boiler seatings 18-4-21 Engines holding down bolts 6-5-21 Completion of pumping arrangements 5-7-21 Boilers fixed 2-5-21 Engines tried under steam 18-7-21 Completion of fitting sea connections 23-4-21 Stern tube 20-4-21 Screw shaft and propeller 20-4-21 Main boiler safety valves adjusted 28-7-21 Thickness of adjusting washers Lock nuts

Material of Crank shaft Steel Identification Mark on Do. FWT Material of Thrust shaft Steel Identification Mark on Do. RS  
Material of Tunnel shafts Steel Identification Marks on Do. RS Material of Screw shafts Steel Identification Marks on Do. EB  
Material of Steam Pipes Steel Test pressure 700

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 No If so, state name of vessel

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

Pumps. Donkey 14x10x12. Fed (2) 12x8x24. Condensate 7 1/4 x 7 x 10 Fresh water 5 1/4 x 4 1/4 x 10  
Aux Condenser. 12x14x14x12. Sanitary 7 1/2 x 6 x 10. Evaporator. 5 1/4 x 4 1/4 x 5. Bilge (2) 7 1/2 x 6 x 10  
Fuel oil (2) 6 x 4 x 6. Fuel pump room. (2) 6 x 5 1/4 x 6. 10 x 6 x 10 Cargo pumps. (2). 18 x 14 x 24

The Machinery & boilers of this vessel have been built under special survey. The materials and workmanship are all good. The Machinery & boilers have been securely fitted on board & proved satisfactory under steam trial.

It is submitted that the vessel be eligible for a record of + LMC 7-21 and to have notation fitted for oil fuel 7-21 Flash point above 150°F in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC. 7.21. F.O. C.L. Fitted for Oil Fuel 7.21 F.P. above 150°F

The amount of Entry Fee ... £30.00

Special ... £530.00

Donkey Boiler Fee ... £250.00

Travelling Expenses (if any) ... £30.00

When applied for

July 29 1921

When received

1921

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York AUG - 9 1921

Assigned

+ LMC - 7.21

MACHINERY CERT  
WRITTEN 8/9/21  
(dated 22/8/21)



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