

# REPORT ON MACHINERY.

No. 3014

REC'D. NEW YORK Nov. 23-1918

Received at London Office

Writing Report Nov 8 1918 When handed in at Local Office Nov 11 1918 Port of Philadelphia Pa  
Survey held at Chester Pa Date, First Survey April 25 1918 Last Survey Oct 30 1918  
on the S.S. "Frederick R. Kellogg" (Number of Vents)

Built at Chester Pa By whom built Sum Shipbuilding Co Tons <sup>Gross</sup>            <sub>Net</sub>             
When built 1918  
made at Chester Pa By whom made Sum Shipbuilding Co when made 1918  
made at Chester Pa By whom made Sum Shipbuilding Co when made 1918  
Horse Power            Owners Pan American Petroleum & Transport Co Port belonging to           

Horse Power as per Section 28 545 Is Refrigerating Machinery fitted for cargo purposes            Is Electric Light fitted           

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3

Cylinders 27" - 45 1/2" - 46" Length of Stroke 51" Revs. per minute 70 Dia. of Screw shaft as per rule 15.09 Material of screw shaft Nickel  
as fitted 15 screw shaft Steel

screw shaft fitted with a continuous liner the whole length of the stern tube            Is the after end of the liner made water tight             
propeller boss Yes If the liner is in more than one length are the joints burned            If the liner does not fit tightly at the part             
the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive            If two             
are fitted, is the shaft lapped or protected between the liners           

Tunnel shaft as per rule 14.209 Dia. of Crank shaft journals as per rule 14.66 14.77 Length of stern bush             
as fitted 14.34 as fitted 15 Dia. of Crank pin 15.5" Size of Crank webs 10 3/4 x 16" Dia. of thrust shaft under           

Dia. of screw 16.3 Pitch of Screw 11.00 No. of Blades 4 State whether moveable Yes Total surface 88

Feed pumps Diameter of ditto            Stroke            Can one be overhauled while the other is at work             
Bilge pumps Diameter of ditto            Stroke            Can one be overhauled while the other is at work             
Donkey Engines Sizes of Pumps            No. and size of Suctions connected to both Bilge and Donkey pumps             
Engine Room In Holds, &c.           

Bilge Injections sizes            Connected to condenser, or to circulating pump            Is a separate Donkey Suction fitted in Engine room & size             
the bilge suction pipes fitted with roses            Are the roses in Engine room always accessible            Are the sluices on Engine room bulkheads always accessible             
connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks             
fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates            Are the Discharge Pipes above or below the deep water line             
each fitted with a Discharge Valve always accessible on the plating of the vessel            Are the Blow Off Cocks fitted with a spigot and brass covering plate             
pipes are carried through the bunkers            How are they protected           

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times             
Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges             
Screw Shaft Tunnel watertight            Is it fitted with a watertight door            worked from           

ENGINES, &c.—(Letter for record (Y)) Manufacturers of Steel Lukens

Heating Surface of Boilers 8331 Is Forced Draft fitted Yes No. and Description of Boilers 3 SE Scotch Boilers  
Working Pressure 190 lb Tested by hydraulic pressure to 285 lb Date of test 26-6-18 No. of Certificate 204

Which boiler be worked separately            Area of fire grate in each boiler 61.8 No. and Description of Safety Valves to             
Boiler Two 3 1/2" Ori Spring Area of each valve            Pressure to which they are adjusted 190 lb Are they fitted with easing gear Yes  
at distance between boilers or uptakes and bunkers or woodwork 8'-0" Mean dia. of boilers 15'-4 1/2" Length 11'-5" Material of shell plates Steel  
Class 1 1/2" Range of tensile strength 60,000 lb Are the shell plates welded or flanged No Descrip. of riveting: cir. seams O-R  
Rivets TR DBS Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 8 1/16" Lap of plates or width of butt straps 20 3/4"  
Stages of strength of longitudinal joint rivets 94.6% Working pressure of shell by rules 204 lb Size of manhole in shell 12" x 16"  
plate 83.4%

Compensating ring Flanged No. and Description of Furnaces in each boiler 3 Morrison Material Steel Outside diameter 11'-1 1/4"  
of plain part top            Thickness of plates crown 7/8" Description of longitudinal joint Weld No. of strengthening rings             
bottom            bottom           

Working pressure of furnace by the rules 204 Combustion chamber plates: Material Steel Thickness: Sides 7/8" Back 7/8" Top 7/8" Bottom 7/16"  
of stays to ditto: Sides 4 1/8" x 7 1/4" Back 4" x 7 1/8" Top 4 1/8" x 7 1/4" If stays are fitted with nuts or riveted heads Both Working pressure by rules 243 lb

Area of stays W. J Area at smallest part 169.4 Area supported by each stay 55.21 Working pressure by rules 230 lb End plates in steam space:             
Material Steel Thickness 1 1/8" Pitch of stays 6 7/4" x 11 1/2" How are stays secured DNV Washers Working pressure by rules 214 lb Material of stays Steel  
at smallest part 5.93 Area supported by each stay 259.6 Working pressure by rules 237 Material of Front plates at bottom Steel

Class 1" Material of Lower back plate Steel Thickness 1 1/16" Greatest pitch of stays 14 1/4" x 7" Working pressure of plate by rules 309 lb  
Pitch of tubes 3 1/4" x 3 1/2" Material of tube plates Steel Thickness: Front 1" Back 3/4" Mean pitch of stays 9"  
across wide water spaces 13" Working pressures by rules 243 lb Girders to Chamber tops: Material Steel Depth and             
width of girder at centre 9 1/2" x 1 3/4" Length as per rule 35" Distance apart: 4 7/8" Number and pitch of stays in each 4 - 4 1/8"  
Working pressure by rules 237 lb Steam dome: description of joint to shell            % of strength of joint           

Thickness of shell plates            Material            Description of longitudinal joint            Diam. of rivet holes             
Working pressure of shell by rules            Crown plates            Thickness            How stayed           

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

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IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Sun Shipbuilding Co.  
CHESTER, PA.

Robert A. Hill

Manufacturer.

Dates of Survey while building { During progress of work in shops -- April 25, May 3, July 1-8-16-31, Aug 2-5-16-18-21-26-30, Sept 13-18-23, Oct 7-15-23-24  
During erection on board vessel --- 1918, Oct 2, Dec 12-18-30, 1919, Jan 2-4-7-8-9-10-11-13-16-21-22-23-29-30, Feb 3-13-14-17-20  
Total No. of visits

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 7-10-18 Slides 7-10-18 Covers 7-10-18 Pistons 7-10-18 Rods 7-10-18

Connecting rods 7-10-18 Crank shaft 7-10-18 Thrust shaft Tunnel shafts Screw shaft Propeller

Stern tube Steam pipes tested Engine and boiler seatings Engines holding down bolts

Completion of pumping arrangements Boilers fixed Engines tried under steam

Completion of fitting sea connections Stern tube Screw shaft and propeller

Main boiler safety valves adjusted Thickness of adjusting washers

Material of Crank shaft Steel Identification Mark on Do. 3116-115 Material of Thrust shaft Identification Mark on Do.

Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Identification Marks on Do.

Material of Steam Pipes Test pressure

Is an installation fitted for burning oil fuel 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 If so, state name of vessel

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

The engines and boilers have been constructed under Special Survey, in accordance with the approved plans. The materials and workmanship are sound and good.

They are being forwarded to be fitted on board.

Three Engines & Boilers have been fitted on board in place of former water tube boilers & tubular and all connections fitted as before. The Engines & Boilers tried under full steaming condition with satisfactory results.

John S. Robson for L. P. Morrison

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

The amount of Entry Fee ... £ : : 8  
Special ... \$ 244.00 : :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) \$ 6.00 : :  
2/3 of fee 163.00 & expenses \$ 6.00 collected here.

Committee's Minute New York MAY 20 1919

Assigned + N.E. & B. 2.19

Wm. R. Ham  
Engineer Surveyor to Lloyd's Register of Shipping.



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