

REPORT ON MACHINERY. No. 2550

REC'D NEW YORK August 23, 1917

Received at London Office JUL 21 18 1917

Date of writing Report Aug. 13, 1917 When handed in at Local Office 19 Port of SAN FRANCISCO,

No. in Survey held at Oakland, California. Date, First Survey Nov. 6th, 1916 Last Survey Aug. 6th, 1917
Reg. Book. (Number of Visits) Nineteen

on the S. S. "FREDERIC R. KELLOGG", Hull No. 111.
This machinery was intended for Union Iron Works Co.'s Hull No. 141. Tons { Gross 7127.23
Net 4418.95

Master White. Built at Oakland, Cal. By whom built Moore & Scott Iron Works When built 1917

Engines made at Schenectady, N.Y. By whom made General Electric Company when made 1917

Boilers made at Bayonne, N. J. By whom made Babcock & Wilcox Co. when made 1917

Registered Horse Power 434 Owners Pan-American Petroleum & Transport Co. Port belonging to Los Angeles.

Shaft Horse Power at Full Power 2600 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.

TURBINE ENGINES, &c.—Description of Engines Curtis Geared Turbine. No. of Turbines 1

Diameter of Rotor Shaft Journals, H.P. L.P. Diameter of Pinion Shaft

Diameter of Journals Distance between Centres of Bearings Diameter of Pitch Circle

Diameter of Wheel Shaft Distance between Centres of Bearings Diameter of Pitch Circle of Wheel

Width of Face Diameter of Thrust Shaft under Collars 14 1/2" Diameter of Tunnel Shaft as per rule 12.645
as fitted -

No. of Screw Shafts One Diameter of same as per rule 13.7" Diameter of Propeller 16'3" Pitch of Propeller 14'-0"

No. of Blades 4 State whether Moveable Yes. Total Surface 85 sq. ft. Diameter of Rotor Drum, H.P. L.P. astern

Thickness at Bottom of Groove, H.P. L.P. Astern. Revs. per Minute at Full Power, Turbine 3374.5 Propeller 90

PARTICULARS OF BLADING.

	H.P.			L.P.			ASTERN.		
	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
1ST EXPANSION									
2ND									
3RD									
4TH									
5TH									
6TH									
7TH									
8TH									

No. and size of Feed pumps Two. One 2" 4 stage turbine; One 12"x7"x18" Simplex.

No. and size of Bilge pumps Three. One-6"x5 1/2"x6" One-12"x8 1/2"x12" One-7"x6"x10"

No. and size of Bilge suction in Engine Room 2-3 1/2" In Holds, &c. F.P. 1-3", For 'd hold 2-2 1/2", Cofferdam 2-3 1/2"

For 'd E.R. well 2-3 1/2" Cir. Pump

No. of Bilge Injections 1 sizes 12" Connected to condenser, or to circulating 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 all connections with the sea direct on the skin of the ship Yes. Are they Valves or Cocks Valves.

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 Above.

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 - 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 - Is it fitted with a watertight door - worked from -

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

Total Heating Surface of Boilers Is Forced Draft fitted No. No. and Description of Boilers 3 B. & W. Water tube.

Working Pressure 225 lbs. Tested by hydraulic pressure to 450 lbs. Date of test Jul. 24 & 25 No. of Certificate

Is each boiler to be worked separately Yes. Area of fire grate in each boiler No. and Description of Safety Valves to

each boiler 2-3 1/2" spring loaded. Area of each valve 9.6 sq. in. Pressure to which they are adjusted 225 lbs. Are they fitted with easing gear Yes.

Smallest distance between boilers or uptakes and bunkers or woodwork - Mean dia. of boilers - Length Material of shell plates

Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Percentages of strength of longitudinal joint plates Working pressure of shell by rules Size of manhole in shell

No. and Description of Furnaces in each Boiler Material Outside diameter

Thickness of plain part top crown Description of longitudinal joint No. of strengthening rings

Thickness of bottom bottom

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

Working pressure of stays to ditto: Sides Back Top If stays are fitted with nuts or riveled heads Working pressure by rules

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

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

Working pressures by rules Girders to Chamber tops: Material Depth and

Length as per rule Distance apart Number and pitch of stays in each

Working pressure by rules Steam dome: description of joint to shell % of strength of joint Diameter

Material Description of longitudinal joint Diameter of rivet holes Pitch of rivets

Working pressure of shell by rules Crown plates: Thickness How stayed

SUPERHEATER. Type B.&W. Tube. Date of Approval of Plan - Tested by Hydraulic Pressure to 500

Date of Test July 24th & 25th Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes

Diameter of Safety Valve 1 1/2" Pressure to which each is adjusted 230 lbs. Is Easing Gear fitted Yes

IS A DONKEY BOILER FITTED? Yes. If so, is a report now forwarded? Yes.

SPARE GEAR. State the articles supplied:— 1 tail shaft and nut complete.

1 propeller blade 6 coupling bolts 1 low speed gear bearing

2 turbine shaft bearings 1 low speed pinion bearing 1 high speed gear bearing

1 high speed pinion bearing. 1 high speed pinion shaft and pinion. 1 emergency governor

100 main condenser tubes. 1 set of suction & discharge valves for every pump.

24 boiler tubes. Assorted bolts & nuts & bar iron.

The foregoing is a correct description,
MOORE & SCOTT IRON WORKS,

By Manufacturer.

Dates of Survey while building During progress of work in shops -- Nov. 6, 1916, Jan. 2, Feb. 24, Mar. 23, May 9, 10, 16, 22, 1917.
During erection on board vessel -- June 6, 12, 21, July 6, 13, 17, 24, 25, 28, Aug. 3, 6, 1917.
Total No. of visits Nineteen.

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " " Yes

Dates of Examination of principal parts—Casings Rotors Blading Gearing

Rotor shaft Thrust shaft May 10th, Tunnel shafts - Screw shaft May 9th Propeller May 2

Stern tube Mar. 23rd, Steam pipes tested June 6th, Engine and boiler seatings May 9th, Engines holding down bolts July 2

Completion of pumping arrangements July 25th, Boilers fixed June 21st, Engines tried under steam Aug. 6th,

Main boiler safety valves adjusted July 28th, Thickness of adjusting washers Lock nuts.

Material and tensile strength of Rotor shaft Identification Mark on Do.

Material and tensile strength of Pinion shaft Identification Mark on Do.

Material of Wheel shaft Identification Mark on Do. Material of Thrust shaft steel Identification Mark on Do.

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

Material of Steam Pipes Steel. Test pressure 675 lbs.

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 a duplicate of a previous case No. If so, state name of vessel -

General Remarks (State quality of workmanship, opinions as to class, &c. The boilers and machinery of this vessel

been built under Special Survey, of materials tested to rule requirements and workmanship found

sound throughout. On completion the machinery was thoroughly tested under working conditions

and found satisfactory. In the opinion of the undersigned the machinery is eligible to be

classed in the Register Book with record of LMC 8-17. Fitted for oil fuel 8-17. F. P. above

150° F. Electric Light. Wireless.

(*) Spare screw shaft

F.T.W.
LLOYDS 142
3/4/17
J.S.R.

It is submitted that
this vessel is eligible for
THE RECORD + LMC.

1 Geared Steam Turbine.

Fitted for oil fuel 8-17. F. P. above
Water tube boilers Annual survey.

Number on turbine casing 12147.
Number on gear casing 2514.

The amount of Entry Fee ... \$ 15.00

Special 2/3 Mch. fee to NYK. \$208.50

Donkey Boiler Fee ... \$ 25.00

NYK. Exps. as per F.E. 9.15

Travelling Expenses (if any) £ -

When applied for,

Aug. 13, 1917

When received,

15/10/17

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York AUG 28 1917

Assigned + Lmb 8-17 Fitted for oil fuel 8-17 F. P. above 150° F.
Elec. Light

MACHINERY CERTIFICATE
WRITTEN 18/9/17



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Foundation