

REPORT ON MACHINERY.

No. 2426.

23 JAN. 1917

Received at London Office

REC'D NEW YORK
 Date of writing Report Dec. 29th 1916 When handed in at Local Office 19 Port of SAN FRANCISCO,
 No. in Survey held at San Francisco, Date, First Survey July 31st Last Survey Dec. 23rd 1916.
 on the s/s "H. C. FOLGER", Union Iron Works Co's No. 129 (Number of Visits 29)
 Tons { Gross 7185
 Net 4456.
 Master C. Adolfsen Built at San Francisco, By whom built Union Iron Works Co. When built 1916
 Engines made at Schenectady, NY. By whom made General Electric Co. when made 1916.
 Boilers made at San Francisco, By whom made Union Iron Works Co. when made 1916.
 Shaft Registered Horse Power 2600 Owners Atlantic Gulf Refining Co. Port belonging to Philadelphia, Pa.
 Shaft Horse Power at Full Power _____ Is Refrigerating Machinery fitted for cargo purposes no. Is Electric Light fitted yes

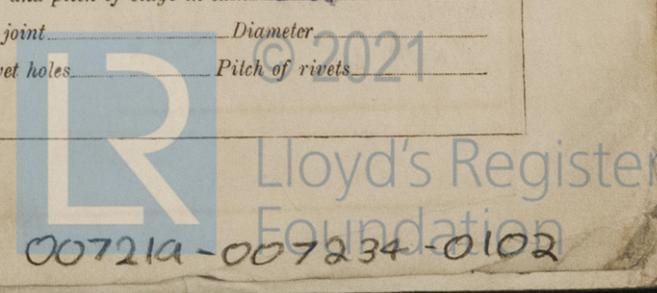
URBINE ENGINES, &c.—Description of Engines Geared Turbines No. of Turbines -
 Diameter of Rotor Shaft Journals, H.P. _____ L.P. _____ Diameter of Pinion Shaft _____
 Diameter of Journals _____ Distance between Centres of Bearings _____ Diameter of Pitch Circle _____
 Diameter of Wheel Shaft _____ Distance between Centres of Bearings _____ Diameter of Pitch Circle of Wheel _____
 Diameter of Face _____ Diameter of Thrust Shaft under Collars 14 1/2" Diameter of Tunnel Shaft _____ as per rule 12.645
 Diameter of same as per rule 13.53 Diameter of Propeller 17'0" as fitted _____ Pitch of Propeller 14'0"
 of Screw Shafts one. Diameter of same as fitted 15" Diameter of Propeller _____ Pitch of Propeller _____
 of Blades four 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 _____ Propeller _____

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.
EXPANSION									
D									
D									
H									
H									
H									
H									
H									

No. and size of Feed pumps 2-independent vertical. 12"x7"x18"
 No. and size of Bilge pumps 3-independent. 2 @ 7x6x10 1 @ 6x5 1/2 x6
 No. and size of Bilge suction in Engine Room & Boiler room: 3-3 1/2" 2-3" in bunkers
2-3 1/2" in Forehold 1-3 1/2" in Forepeak 1-2" in chain locker 1-3 1/2" in after peak.
 No. of Bilge Injections one sizes 12" Connected to condenser, or 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 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 _____

OILERS, &c.—(Letter for record S) Manufacturers of Steel Worth Brothers, Philadelphia, Pa.
 Total Heating Surface of Boilers 8325sqft Forced Draft fitted yes No. and Description of Boilers 3-Marine, multitubular.
 Working Pressure 220 lbs. Tested by hydraulic pressure to 330 lbs. Date of test Sept 27-30 Oct No. of Certificates 54, 55, 56.
 Can each boiler be worked separately yes Area of fire grate in each boiler 165 sq. ft. No. and Description of Safety Valves to each boiler 2-spring loaded Area of each valve 9.6 sq. in Pressure to which they are adjusted 220 lbs. Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork _____ Mean dia. of boilers 15' 1 1/2" Length 11'9" Material of shell plates steel
 Thickness 1-19/32 Range of tensile strength 28-32 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 10" Lap of plates or width of butt straps 22 3/8"
 Per centages of strength of longitudinal joint rivets 88.8 Working pressure of shell by rules 241 Size of manhole in shell 16" x 12" plates 84.4
 Size of compensating ring flanged No. and Description of Furnaces in each Boiler 3-Morison Material steel Outside diameter 48 1/16"
 Length of plain part top _____ bottom _____ Thickness of plates crown 21/32" Description of longitudinal joint weld. No. of strengthening rings _____ bottom _____
 Working pressure of furnace by the rules 222.6 Combustion chamber plates: Material steel Thickness: Sides 11/16 Back 11/16 Top 11/16 Bottom 15/16
 Pitch of stays to ditto: Sides 7 7/8 x 6 3/4 Back 7 9/16 x 7 3/4 Top 8 x 6 3/4 If stays are fitted with nuts or riveted heads rivet heads Working pressure by rules 220
 Material of stays steel Diameter at smallest part 1 5/8 Area supported by each stay 57.5 Working pressure by rules 256 End plates in steam space _____
 Material steel Thickness 1 1/4 Pitch of stays 17 1/2 x 17 1/8 How are stays secured d.nuts Working pressure by rules 236 Material of stays steel
 Diameter at smallest part 3 1/4" Area supported by each stay 299.69 sq in Working pressure by rules 287 Material of Front plates at bottom steel
 Thickness 13/16 Material of Lower back plate steel Thickness 13/16" Greatest pitch of stays 15" Working pressure of plate by rules 252
 Diameter of tubes 3" Pitch of tubes 4 7/8 x 4 1/16 Material of tube plates steel Thickness: Front 13/16 Back 7/8" Mean pitch of stays 10
 Pitch across wide water spaces 13" Working pressures by rules 236 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 12"x 1 1/2" Length as per rule 34" Distance apart 8" Number and pitch of stays in each 4 @ 6 3/4"
 Working pressure by rules 345 Steam dome: description of joint to shell _____ % of strength of joint _____ Diameter _____
 Thickness of shell plates _____ 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 U.I.Wks. ✓ Date of Approval of Plan 14/6/16 ✓ Tested by Hydraulic Pressure to 660 lbs ✓
 Date of Test Oct 27th Nov. 3rd ✓ 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" ✓ Pressure to which each is adjusted 270 lbs. ✓ Is Easing Gear fitted no ✓

IS A DONKEY BOILER FITTED? no. ✓ If so, is a report now forwarded? _____

SPARE GEAR. State the articles supplied:— 1-set main coupling bolts. 1-set feed & bilge pump valves. Tail shaft complete with nut. 1-set thrust collars complete for main turbine. 1-set steam turbine bearings. 1-high speed pinion. 1-high speed shaft with couplings. 1-set high speed bearings. 2-low speed shaft pinion bearings. 1-low speed shaft bearing. 1-set air pump valves. 50-condensate tubes. 2-propeller blades. Quantity assorted bolts and nuts. Iron of various sizes. ✓

The foregoing is a correct description.
UNION IRON WORKS CO.

By Geo. J. Connes Manufacturer.
 Engineer-in-Chief.

Dates of Survey while building { During progress of work in shops - - } July 31 Aug 9-16-18-23-28-30 Sept 7-14-20-27 Oct 4-9-12-19-27 Nov 3
 { During erection on board vessel - - - } Oct 24-27 Nov 3-7-11-22-28 Dec 4-16-17-18-19-23
 Total No. of visits twenty-nine (29) Is the approved plan of main boiler forwarded herewith yes ✓

Dates of Examination of principal parts—Casings _____ Rotors _____ Blading _____ Gearing _____

Rotor shaft _____ Thrust shaft Aug 30. Tunnel shafts _____ Screw shaft Oct 12. Propeller Dec 16

Stern tube Oct 12. Steam pipes tested Dec 4th Engine and boiler seatings Oct 12 Engines holding down bolts Nov 3rd

Completion of pumping arrangements Nov 29 Boilers fixed Nov 29 Engines tried under steam Dec 3rd.

Main boiler safety valves adjusted Dec. 18th Thickness of adjusting washers locknuts.

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 660 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.)

This vessel is fitted with Curtis Geared Turbine. The Machinery & Boilers were constructed under special survey, of materials tested to meet requirements. Workmanship sound throughout. On completion the machinery was thoroughly tested under working conditions with satisfactory results.

In the opinion of the undersigned the machinery is eligible to be classed in the Register Book with notation of *LMC 12-16. Fitted for oil fuel 12-16, F.P. above 150°F. Electric Light.

1. Geared Steam Turbine THE BROOK + LMC 12.16. F.D. Fitted for oil fuel 12.16. F.P. above 150°F.

The amount of Entry Fee	£ \$15.00 ✓	When applied for,
Special	£ 230.00 ✓	19.
Donkey Boiler Fee	£ :	When received,
Travelling Expenses (if any)	£ :	19.
Sunday fee	10.00	

Committee's Minute New York JAN 11 1917

Assigned + Lmc. 12.16. Fitted for oil fuel 12.16 F.P. above 150°F

J.W.D. 3/1/17
J. Blackett & Co. Surveyors
 Engineer Surveyor to Lloyd's Register of Shipping.

LLOYD'S REGISTER
 No 1882
 JD
 1882
 JD
 1882
 JD

Certificate (if required) to be sent to the Committee's Minute.

