

Rpt. 4.

# REPORT ON MACHINERY.

No. 363  
TUE. 18 JAN. 1921

Received at London Office

Date of writing Report 24<sup>th</sup> Dec 1920 When handed in at Local Office 24<sup>th</sup> Dec 1920 Port of Jacksonville, Fla.

No. in Survey held at Savannah, Ga. Date, First Survey 23 October Last Survey 11<sup>th</sup> Dec 1920

Reg. Book. on the Single Screw Steam Steamer "PEARLDON" (Number of Visits) Tons { Gross 5186.97  
Net 3186.

Master W. E. Kella Built at Savannah By whom built Jerry S. B. Corp. When built 1920.10.

Engines made at By whom made Badenhausen Co. when made 1919

Boilers made at Chester, Pa. By whom made Jerry S. B. C. when made 1919

Registered Horse Power Owners U. S. Mex Oil Corp. Port belonging to New York

Nom. Horse Power as per Section 28 562 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 1/2, 41 1/2, 78 Length of Stroke 48 Revs. per minute 80 Dia. of Screw shaft as per rule 14.86 Material of screw shaft O. H. Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube in 2 piece Is the after end of the liner made water tight Yes. If the liner is in more than one length are the joints burned turned. 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'-0 3/4"

Dia. of Tunnel shaft as per rule 14.86 Dia. of Crank shaft journals as per rule 13.98 Dia. of Crank pin 14 3/8 Size of Crank webs 27 x 27 3/4 Dia. of thrust shaft under collars 14" Dia. of screw 16.9 Pitch of Screw 14'-10" No. of Blades 4 State whether moveable Yes. Total surface 90.9 ft

No. of Feed pumps 2 Diameter of ditto 12 x 8 Stroke 18 Can one be overhauled while the other is at work Yes.

No. of Bilge pumps 2 Diameter of ditto 5" Stroke 21" Can one be overhauled while the other is at work Yes.

No. of Donkey Engines 1 Sizes of Pumps 14 x 10 1/4 x 12 x 6 x 5 3/4 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 5-3 1/2 Bilge In Holds, &c. 2-3 1/2

No. of Bilge Injections 1 sizes 10" Connected to condenser, or to 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 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 Yes. 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 suction pipes for feed & appendages. How are they protected wood covering.

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 Yes. worked from Yes.

BOILERS, &c.—(Letter for record Yes) Manufacturers of Steel See separate notes

Total Heating Surface of Boilers 8331 Is Forced Draft fitted yes No. and Description of Boilers 3 SB.

Working Pressure 210 Tested by hydraulic pressure to 210 Date of test 1920 No. of Certificate 3 SB.

Can each boiler be worked separately Yes. Area of fire grate in each boiler See separate notes No. and Description of Safety Valves to each boiler See separate notes Are they fitted with easing gear Yes.

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

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

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

Per centages of strength of longitudinal joint See separate notes Working pressure of shell by rules See separate notes Size of manhole in shell See separate notes

Size of compensating ring See separate notes No. and Description of Furnaces in each boiler See separate notes Material See separate notes Outside diameter See separate notes

Length of plain part See separate notes Thickness of plates See separate notes Description of longitudinal joint See separate notes No. of strengthening rings See separate notes

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

Pitch of stays to ditto: Sides See separate notes Back See separate notes Top See separate notes If stays are fitted with nuts or riveted heads See separate notes Working pressure by rules See separate notes

Material of stays See separate notes Area at smallest part See separate notes Area supported by each stay See separate notes Working pressure by rules See separate notes End plates in steam space: See separate notes

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

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

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

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

Pitch across wide water spaces See separate notes Working pressures by rules See separate notes Girders to Chamber tops: Material See separate notes Depth and thickness of girder at centre See separate notes Length as per rule See separate notes Distance apart See separate notes Number and pitch of stays in each See separate notes

Working pressure by rules See separate notes Steam dome: description of joint to shell See separate notes % of strength of joint See separate notes

Diameter See separate notes Thickness of shell plates See separate notes Material See separate notes Description of longitudinal joint See separate notes Diam. of rivet holes See separate notes

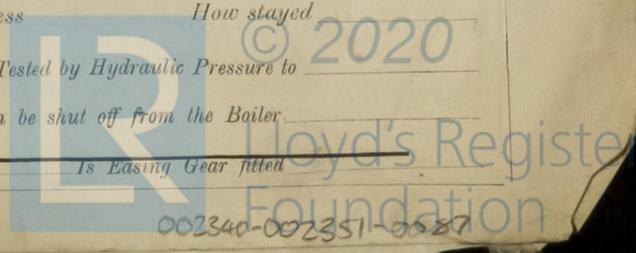
Pitch of rivets See separate notes Working pressure of shell by rules See separate notes Crown plates See separate notes Thickness See separate notes How stayed See separate notes

SUPERHEATER. Type See separate notes Date of Approval of Plan See separate notes Tested by Hydraulic Pressure to See separate notes

Date of Test See separate notes Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler See separate notes

Diameter of Safety Valve See separate notes Pressure to which each is adjusted See separate notes Is Easing Gear fitted See separate notes

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002340-002351-0287

IS A DONKEY BOILER FITTED? *Yes.*

If so, is a report now forwarded? *Yes.*

SPARE GEAR. State the articles supplied:— 2 connecting rod lift ends, bolts & nuts; 2 connecting rod bolts & nuts; 2 main bearing bolts; 1 set of coupling bolts; 1 set of feed sledge pump valves. A quantity of assorted bolts & nuts: Iron of various sizes: Propeller blades; 6 cylinder cover bolts; 6 guide ring bolts; 3 dry condenser tubes; 1 set safety valve springs.

The foregoing is a correct description,

*Tony Shepharding* <sup>Manufacturer.</sup> *Geo. Barber* <sup>Surveyor</sup>

Dates of Survey while building: During progress of work in shops -- Oct. 23, 26, Nov. 1, 8, 10, 11, 12, 13, 16, 22 Dec. 4, 10, 13, 18, 21. During erection on board vessel --- 15. Total No. of visits 15.

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

Is the approved plan of donkey boiler forwarded herewith *Yes.*

Dates of Examination of principal parts—Cylinders 23 Oct. Slides 23 Oct. Covers 23 Oct. Pistons ✓ Rods 23 Oct.

Connecting rods 1 No. Crank shaft 1 No. Thrust shaft 1 No. Tunnel shafts ✓ Screw shaft 23 Oct. Propeller 29 Oct.

Stern tube 23 Oct. Steam pipes tested 1 No. Engine and boiler seatings 23 Oct. Engines holding down bolts 10 No.

Completion of pumping arrangements 23 Oct. Boilers fixed Nov. 10. Engines tried under steam 21<sup>st</sup> Dec.

Completion of fitting sea connections 10 No. Stern tube 23 Oct. Screw shaft and propeller 26 Oct.

Main boiler safety valves adjusted 21<sup>st</sup> Dec. Thickness of adjusting washers ✓

Material of Crank shaft *A.H. Steel* Identification Mark on Do. *A.B. 148*. Material of Thrust shaft *A.H. Steel* Identification Mark on Do. *A.B. 148*

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *A.H. Steel* Identification Marks on Do. *A.B. 70*

Material of Steam Pipes *Steel* Test pressure *570 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 duplicate of a previous case *Yes.* If so, state name of vessel *S.S. "Lilmar"*

General Remarks (State quality of workmanship, opinions as to class, &c. *Workmanship good throughout.*

*The above machinery was built under the supervision of the American Bureau Surveyors.*

*It has been satisfactorily installed & on completion was tried under working conditions & found satisfactory.*

*Safety valves were adjusted under steam to 190 lbs. pressure.*

*The machinery of this vessel, as now seen, is eligible, in my opinion to be classed ~~as~~ LMC. (will date)*

**It is submitted that this vessel is eligible for THE RECORD. LMC. 12.20 FD**

**FITTED FOR OIL FUEL. 12.20 FP ABOVE 150°F**

MACHINERY DEPT  
WRITTEN 24/2/21  
dated 18/1/21  
*Recd 26/1/21*

The amount of Entry Fee ... £	:	:	When applied for,
Special ...	£	160.00	24 Dec 1920
Donkey Boiler Fee ...	£	:	When received,
Travelling Expenses (if any) £	£	52.00	24/1/21

*William Hamilton & J. Boyle.*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **New York JAN - 4 1921**

Assigned **LMC. 12.20**

