

Date of writing Report *Jan 11 1922* When handed in at Local Office *10 1/2* Port of *New York & Jacksonville*
No. in Survey held at *1011* Date, First Survey *19 Mar 1920* Last Survey *13 January 1922*
Reg. Book. *11010* on the *Boiler & Machinery Co. "BYRON D. BENSON"* (Number of Visits *62*)
Master *✓* Built at *Tampa, Fla* By whom built *Oscar Daniels Co.* Tons { Gross *8211.98*
Engines made at *Jersey City, N.J.* By whom made *Vulcan Iron Works, Inc.* when made *1921-*
Boilers made at *Hearney, N.J.* By whom made *Federal Ship Building Company* when made *1921-*
Registered Horse Power *5957* Owners *Indewater Oil Co.* Port belonging to *New York*
Nom. Horse Power as per Section 28 *5957* Is Refrigerating Machinery fitted for cargo purposes *No.* Is Electric Light fitted *Yes.*

ENGINES, &c.—Description of Engines *Direct Acting Quadruple Expansion.* No. of Cylinders *4* No. of Cranks *4*
Dia. of Cylinders *24-35-51-75* Length of Stroke *31* Revs. per minute *74* Dia. of Screw shaft *14.88* Material of *S. 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 *✓* 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 *✓* If two
liners are fitted, is the shaft lapped or protected between the liners *✓* Length of stern bush *5-9*
Dia. of *✓* as per rule *13.48* Dia. of Crank shaft journals *as per rule 14.15* Dia. of Crank pin *14 3/4* Size of Crank web *9 1/2 x 28* Dia. of thrust shaft under
collars *14 1/2* Dia. of screw *17-9* Pitch of Screw *17-9* No. of Blades *4* State whether motenale *Yes.* Total surface *100 sq*
No. of Feed pumps *3* Diameter of ditto *8 x 8* Stroke *18* Can one be overhauled while the other is at work *Yes.*
No. of Bilge pumps *2* Diameter of ditto *3 1/2* Stroke *26* Can one be overhauled while the other is at work *Yes.*
No. of Donkey Engines *1* Sizes of Pumps *8 x 8 1/2 x 12* No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room *4-3" vertical 4-3" bilge 1-4" donkey suction.* In Holds, &c. *8-3" in fore hold. One 8" in fore pump room. One 8" in fore hold.*
No. of Bilge Injections *1* sizes *10"* Connected to *condenser on to circulating pump* *Yes.* Is a separate Donkey Suction fitted in Engine room & size *Yes. 4"*
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 *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 *below*
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) Manufacturers of Steel
Total Heating Surface of Boilers *8418 sq* Is Forced Draft fitted *Yes.* No. and Description of Boilers *3 Single Ended*
Working Pressure *Tested by hydraulic pressure to* Date of test *No. of Certificate*
Can each boiler be worked separately *Area of fire grate in each boiler* No. and Description of Safety Valves to
each boiler *Area of each valve* Pressure to which they are adjusted *Are they fitted with easing gear*
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*
long. seams *Diameter of rivet holes in long. seams* Pitch of rivets *Lap of plates or width of butt straps*
Per centages of strength of longitudinal joint *Working pressure of shell by rules* Size of manhole in shell
Size of compensating ring *No. and Description of Furnaces in each boiler* Material *Outside diameter*
Length of plain part *Thickness of plates* Description of longitudinal joint *No. of strengthening rings*
Working pressure of furnace by the rules *Combustion chamber plates: Material* Thickness: Sides *Back* Top *Bottom*
Pitch of stays to ditto: Sides *Back* Top *If stays are fitted with nuts or riveted heads* Working pressure by rules
Material of stays *Area at smallest part* Area supported by each stay *Working pressure by rules* End plates in steam space:
Material *Thickness* Pitch of *How are stays secured* Working pressure by rules *Material of stays*
Area 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 *Working pressure of plate by rules*
Diameter of tubes *Pitch of tubes* Material of tube plates *Thickness* Back *Mean pitch of stays*
Pitch across wide water spaces *Working pressures by rules* Girders to Chamber tops: Material *Depth and*
thickness of girder at centre *Strength 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 *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

SUPERHEATER. 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*
Date of Test *Pressure to which each is adjusted* Is Easing Gear fitted

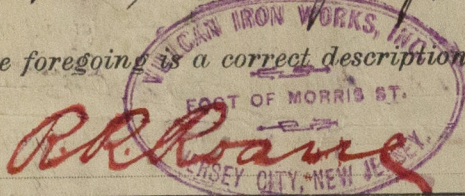
IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:

Propeller shaft & nut: 2 propeller blades: 1 set of slide & nut for one blade: 1 set of coupling bolts & nuts: 1 stern tube complete: 1 section of crank shaft: 1 propeller boss: 1 set of packing rings for H.P. & M.P. pistons: 1 thrust block & nut: 1 securing strap complete: 1 set of crank pin & blades: 1 set of top end braces: 2 top end bolts & nuts: 2 bottom end bolts & nuts: 2 main bearing bolts & nuts: 1 set of coupling bolts for intermediate shafting: 12 guide cover clips & nuts: 1 valve spindle & link block: Relief valve springs for H.P. & M.P. cylinders: metallic pack for piston & valve rods: 1 air pump rod & bucket: 1 set of valves & seats for bilge pumps: 1 set of valves and seats for air pump & 2 plain & 5 stay tubes for main boilers: 25 condenser tubes & 100 joints: 1 set of bolts & nuts: 1 set of iron rods of mild steel & a quantity of hand tools.

The foregoing is a correct description,



Manufacturer.

Dates of Survey while building: During progress of work in shops - New York 1930 - Mar. 19, 29 Apr. 1, 15, 22 May 3, 13, 25, 28 Jun. 14, 21 Jul. 6, 14, 26 Aug. 9, 21, 26 Sep. 10, 24, 25, 28 Oct. 4, 13
During erection on board vessel - 19, 29 Nov. 4, 8, 15 Dec. 2, 7, 13, 20, 23, 28 - 1931 - Jan. 3, 10, 17, 19, 21 June 7, 14, 17, 21 Aug. 7, 14, 17, 21 Sept. 3, 15, 17, 20 Oct. 3, 6, 18
Total No. of visits 62.

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts: Cylinders 23/2/20 Slides 28/2/20 Covers 28/2/20 Pistons 28/2/20 Rods 28/2/20
Connecting rods 28/2/20 Crank shaft 7/12/20 Thrust shaft 28/5/20 Tunnel shafts 25/5/20 Screw shaft 28/6/20 Propeller 25/5/20
Stern tube 25/5/20 Steam pipes tested 18/10/21 Engine and boiler seatings 26/8/21 Engines holding down bolts 18 Oct. 1921
Completion of pumping arrangements 13th Dec. 1921 Boilers fixed 3 Oct. 1921 Engines tried under steam 21 Dec. 1921
Completion of fitting sea connections 15th Sept. 1921 Stern tube 30/8/21 Screw shaft and propeller 15 Sept. 1921
Main boiler safety valves adjusted 10/Jan/22 Thickness of adjusting washers
Material of Crank shaft Steel Identification Mark on Do. 668 Material of Thrust shaft Steel Identification Mark on Do. 668
Material of Tunnel shafts Steel Identification Marks on Do. 668 Material of Screw shafts Steel Identification Marks on Do. 668
Material of Steam Pipes Steel Test pressure 67 1/2 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 See N.Y. Report 19622.

General Remarks (State quality of workmanship, opinions as to class, &c.) The Boilers and Machinery of this vessel have been constructed under Special Survey and in accordance with the Rules & Approved plans. The materials and workmanship are good and efficient. The Machinery has now been disconnected for shipment.

The above machinery has been satisfactorily installed on board & on completion was tried under full working conditions & found satisfactory. Safety valves have been adjusted under steam to 220 lbs in the case of main boilers & to 180 lbs for Donkey boiler. In the opinion of the undersigned the vessel is eligible for the record of LMC (with date) in the Register.

It is submitted that this vessel is eligible for THE RECORD. F.L.M.C. - 1.22. F.D. C.L.
Fitted for Oil Fuel, 1.22, F.P. above 150°F.

The amount of Entry Fee ... \$30.00 : When applied for, 14 Jan. 1922
Special ... \$55.92 :
Donkey Boiler Fee ... \$523.92 :
Travelling Expenses (if any) & See correspondence re fees attached 3.6.22
Committee's Minute New York JAN 31 1922
Assigned + LMC-1.22
Machinery Cert. WRITTEN 24.6.22 dated 9.3.22

