

## REPORT ON MACHINERY.

No. 22751

TUE. MAY. 22 1923

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Received at London Office

Date of writing Report 16 Apr 1923 When handed in at Local Office 1st May 1923 Port of New York

No. in Survey held at Mobile, Ala. Date, First Survey 9 April Last Survey 28 April 1923

Reg. Book. 8077 on the steel screw steamer DERBYLINE (Number of Visits 18) Gross Tons 7063 Net Tons 4348

Master ✓ Built at Alameda, Cal. By whom built Bethlehem S. B. Corporation When built 1919

Engines made at San Francisco, Cal. By whom made Bethlehem S. B. Corporation when made 1919

Boilers made at d<sup>2</sup> By whom made d<sup>2</sup> when made 1919

Registered Horse Power ✓ Owners The Tescas Co. Inc. Port belonging to PORT ARTHUR, TEX.

Nom. Horse Power as per Section 28 597 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 27"-47"-78" Length of Stroke 48" Revs. per minute 80 Dia. of Screw shaft as per rule 15.4 Material of screw shaft 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'-6"

Dia. of Tunnel shaft as per rule 14.4 Dia. of Crank shaft journals as per rule 15.1 Dia. of Crank pin 15 1/2" Size of Crank webs 30"x9 1/2" Dia. of thrust shaft under collars 15 1/2" Dia. of screw 18'-0" Pitch of Screw 17'-1" No. of Blades 4 State whether moveable yes Total surface 106.6 sq ft

No. of Feed pumps 2 Diameter of ditto 4 1/2" Stroke 24" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 24" Can one be overhauled while the other is at work yes

No. of Donkey Engines 2 Sizes of Pumps Bilge 6x6x6 Fire 12x8 1/2x12 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 4-3 1/2" In Holds, &c. Oil cargo pumping system

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 ✓

Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks valves + cocks

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 oil fuel How are they protected yes

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 no tunnel Is it fitted with a watertight door ✓ worked from ✓

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

Total Heating Surface of Boilers 8235 sq ft Is Forced Draft fitted yes No. and Description of Boilers 3 Scotch type single ended

Working Pressure 220 lb Tested by hydraulic pressure to 330 lb Date of test ✓ No. of Certificate ✓

Can each boiler be worked separately yes Area of fire grate in each boiler ✓ No. and Description of Safety Valves to each boiler 2 spring loaded Area of each valve 9.62 sq ft Pressure to which they are adjusted 220 lb Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 9" Mean dia. of boilers 15'-0" Length 11'-9" Material of shell plates steel

Thickness 1 1/16" Range of tensile strength 60/70000 lb Are the shell plates welded or flanged no Descrip. of riveting: cir. seams Double long. seams T.R.D.B.S Diameter of rivet holes in long. seams 1 5/16" Pitch of rivets 10" Lap of plates or width of butt straps 22 3/8"

Per centages of strength of longitudinal joint 91.5 Working pressure of shell by rules 236 lb Size of manhole in shell ✓

Size of compensating ring ✓ No. and Description of Furnaces in each boiler 3 Morrison Material steel Outside diameter 48 3/32"

Length of plain part top Thickness of plates crown 4.3 Description of longitudinal joint welded No. of strengthening rings ✓

Working pressure of furnace by the rules 220 lb Combustion chamber plates: Material steel Thickness: Sides 1 1/16" Back 1 1/16" Top 1 1/16" Bottom 1 5/16"

Pitch of stays to ditto: Sides 6 3/4 x 7 7/8 Back 7 1/2 x 7 3/4 Top 8 x 6 3/4 If stays are fitted with nuts or riveted heads riveted heads Working pressure by rules 225

Material of stays steel Area at smallest part 1.75 sq ft Area supported by each stay 54.5 sq ft Working pressure by rules 250 End plates in steam space: Material steel Thickness 1 1/4" Pitch of stays 17 1/8 x 17 1/8" How are stays secured double nuts Working pressure by rules 240 Material of stays steel

Area at smallest part 8.25 sq ft Area supported by each stay 294 sq ft Working pressure by rules 290 Material of Front plates at bottom steel

Thickness 1 5/16" Material of Lower back plate steel Thickness 1 3/16" Greatest pitch of stays 13 x 7 7/8" Working pressure of plate by rules 380

Diameter of tubes 3" Pitch of tubes 4 1/8" Material of tube plates steel Thickness: Front 1 5/16" Back 7/8" Mean pitch of stays 12 3/8 x 8 1/4"

Pitch across wide water spaces 13" Working pressures by rules 265 lb 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 330 lb Steam dome: description of joint to shell none % 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 none Date of Approval of Plan ✓ Tested by Hydraulic Pressure to ✓

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

Diameter of Safety Valve ✓ Pressure to which each is adjusted ✓ Is Easing Gear fitted ✓

IS A DONKEY BOILER FITTED?

No.

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— One pair connecting rod top end bolts + nuts, one pair connecting rod bottom end bolts + nuts, one pair main bearing bolts + nuts, one set of shaft coupling bolts, one set of feed + bilge pump valves, assorted nuts, bolts + bar iron. One spare propeller shaft, two propeller blades

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1923 April 8, 9, 10, 11, 12, 13, 14, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, and 28<sup>th</sup>  
During erection on board vessel --  
Total No. of visits 18,

Is the approved plan of main boiler forwarded herewith yes.

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 11/4/23 Slides 20.4.23 Covers 11/4/23 Pistons 11/4/23 Rods 11/4/23  
Connecting rods 11/4/23 Crank shaft 11/4/23 Thrust shaft 20.4.23 Tunnel shafts ✓ Screw shaft 17.4.23 Propeller 17.4.23

Stern tube 17.4.23 Steam pipes tested ✓ Engine and boiler seatings 20.4.23 Engines holding down bolts 20.4.23

Completion of pumping arrangements 17.4.23 Boilers fixed 20.4.23 Engines tried under steam 28.4.23

Completion of fitting sea connections 17.4.23 Stern tube 17.4.23 Screw shaft and propeller 17.4.23

Main boiler safety valves adjusted 28.4.23 Thickness of adjusting washers Lock nuts fitted.

Material of Crank shaft Steel 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 ✓

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 ✓ If so, state name of vessel ✓

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

The machinery & boilers of this vessel were not built under Special Survey, but they have been examined by the undersigned, & in our opinion, they comply with the Rules & the workmanship & material are good.

They are now in good & safe working condition & eligible, in our opinion, to receive the notations LMC 4.23 FD and 'FITTED FOR OIL FUEL 4.23. F.P. ABOVE 150°F.' in the Register Book.

The amount of Entry Fee ... £ Fee charged:  
Special ... £ m.  
Donkey Boiler Fee ... £ hull  
Travelling Expenses (if any) £ report.

When applied for,

When received,

J. N. Osborn

John S. Heck.

Engineer Surveyor to Lloyd's Register of Shipping.

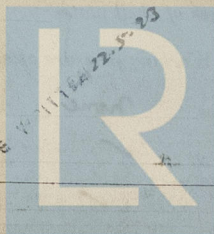
Committee's Minute New York MAY 8 1923

Assigned

LMC-4.23

Fitted for oil fuel 4.23 F.P. above 150°F

TS-4.23



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