

# REPORT ON MACHINERY

No. 21930  
MON. SEP. 4 1922

Received at London Office

Writing Report *Aug. 8<sup>th</sup> 1922* When handed in at Local Office *8<sup>th</sup> Aug. 1922* Port of *New York*  
 in Survey held at *New York* Date, First Survey *July 29<sup>th</sup> 1922* Last Survey  
 g. Book. *232* on the *Steel Screw Steamer "ELIZABETH"* Ex. *MACOMET* (Number of Visits)  
 ster Built at *Wilmington Del.* By whom built *Bethlehem S. B. Corp.* Tons Gross *3482*  
 gines made at *Wilmington Del.* By whom made *Bethlehem S. B. Corp.* Net *2112*  
 ilers made at " " By whom made " " " " When built *1919*  
 gistered Horse Power *292* Owners *A. H. Bull Les.* when made *1919*  
 m. Horse Power as per Section 28 *292* Is Refrigerating Machinery fitted for cargo purposes *No* Port belonging to *Wilmington* Is Electric Light fitted *Yes*

GINES, &c.—Description of Engines *Triple expansion Reciprocating* No. of Cylinders *3* No. of Cranks *3*  
 a. of Cylinders *22. 37 1/2 - 60"* Length of Stroke *42"* Revs. per minute *120* Dia. of Screw shaft as per rule *12.9"* Material of *S.*  
 the screw shaft fitted with a continuous liner the whole length of the stern tube *No* Is the after end of the liner made water tight  
 the propeller boss *Yes* If the liner is in more than one length are the joints burned *No* 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  
 ers are fitted, is the shaft lapped or protected between the liners *3 liners fitted with 1/2 lap joints* Length of stern bush *51"*  
 a. of Tunnel shaft as per rule *4.23 11.4"* Dia. of Crank shaft journals as per rule *11.79 11.97"* Dia. of Crank pin *12.25"* Size of Crank webs *24 1/2 x 8 3/4"* Dia. of thrust shaft under  
 lars *12.25"* Dia. of screw *16.3"* Pitch of Screw *15.5"* No. of Blades *4* State whether moveable *Yes* Total surface  
 of Feed pumps *2 Attached* Diameter of ditto *8 3/4"* Stroke *13"* Can one be overhauled while the other is at work *Yes*  
 of Bilge pumps *2 Attached* Diameter of ditto *4"* Stroke *13"* Can one be overhauled while the other is at work *Yes*  
 of Donkey Engines *3* Sizes of Pumps *1 Duplex (14" x 10" x 12") 1 (10" x 10" x 12") 1 (9" x 6" x 10")* No. and size of Suctions connected to both Bilge and Donkey pumps  
 Engine Room *4-3"* In Holds, &c. *2-3" in No. 1, 2-3" in No. 2, 2-3" No. 3*

of Bilge Injections *1* sizes *8"* Connected to condenser, or to circulating pump *in Pump* a separate Donkey Suction fitted in Engine room of size *1-3"*  
 e 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 *None*  
 e all connections with the sea direct on the skin of the ship *Yes* Are they Valves or Cocks *Both*  
 e 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 *Both*  
 e 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*  
 hat pipes are carried through the bunkers *None* How are they protected *Yes*

e all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times *Yes*  
 e the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges *Yes*  
 the Screw Shaft Tunnel watertight *Yes* Is it fitted with a watertight door *Yes* worked from *Engine Room Top Platform*

ILERS, &c.—(Letter for record *S.*) Manufacturers of Steel *Bethlehem S. B. Corp. (Sparrow Point)*

tal Heating Surface of Boilers *4433.12 sq. ft.* Forced Draft fitted *No* No. and Description of Boilers *2 Single ended Scotch*  
 orking Pressure *190* Tested by hydraulic pressure to *285* Date of test *9/9/22* No. of Certificate

n each boiler be worked separately *Yes* Area of fire grate in each boiler *71.87 sq. ft.* No. and Description of Safety Valves to  
 h boiler *2 Spring loaded* Area of each valve *7.068 sq. in.* Pressure to which they are adjusted *190* Are they fitted with easing gear *Yes*

allest distance between boilers or uptakes and bunkers or woodwork *About 15"* Mean dia. of boilers *15.1 1/8"* Length *11.34"* Material of shell plates *S.*  
 ickness/ *29/64* Range of tensile strength *60000 lbs.* Are the shell plates welded or flanged *No* Descrip. of riveting: cir. seams *D.R.L.*

g. seams *T.R.O.B.S.* Diameter of rivet holes in long. seams *1 9/16"* Pitch of rivets *10 1/4. 5 1/2* Lap of plates or width of butt straps *22 1/4"*  
 r centages of strength of longitudinal joint rivets *95* Working pressure of shell by rules *209* Size of manhole in shell *23" x 19"*

ze of compensating ring *38" x 34" x 1 29/64"* No. and Description of Furnaces in each boiler *3 Morrison* Material *S.* Outside diameter *50 1/2"*  
 ngth of plain part top *5 1/8"* Thickness of plates crown *5 1/8"* Description of longitudinal joint *Welded* No. of strengthening rings *None*

orking pressure of furnace by the rules *200* Combustion chamber plates: Material *S.* Thickness: Sides *5 1/8"* Back *4 1/64"* Top *5 1/8"* Bottom *7 1/8"*  
 tech of stays to ditto Sides *7" x 7 1/4"* Back *7 3/8" x 7 3/8"* Top *7 3/4" x 7 3/8"* If stays are fitted with nuts or riveted heads *Top into remainder riveted* Working pressure by rules *190*

aterial of stays *S.* Area at smallest part *1.52 sq. in.* Area supported by each stay *54.4 sq. in.* Working pressure by rules *223* End plates in steam space:  
 aterial *S.* Thickness *1"* Pitch of stays *15 1/4" x 15 1/4"* How are stays secured *Drunk & hooked* Working pressure by rules *193* Material of stays *S.*

rea at smallest part *5.41 sq. in.* Area supported by each stay *232.5 sq. in.* Working pressure by rules *242* Material of Front plates at bottom *S.*  
 ickness *3/4 x 3/4 Double* Material of Lower back plate *S.* Thickness *3/4 x 3/4 Double* Greatest pitch of stays *15" x 16"* Working pressure of plate by rules *249*

iameter of tubes *3"* Pitch of tubes *4 1/2" x 4 1/4"* Material of tube plates *S.* Thickness: Front *3/4" x 5/8"* Back *1 1/16"* Mean pitch of stays *9"*  
 tch across wide water spaces *13 1/2"* Working pressures by rules *248* Girders to Chamber tops: Material *S.* Depth and

ckness of girder at centre *9" x 13 1/4"* Length as per rule *33* Distance apart *7 1/8"* Number and pitch of stays in each *3 @ 7 3/4"*  
 orking pressure by rules *237* Steam dome: description of joint to shell % of strength of joint

iameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes  
 tch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

PERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

te of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler  
 ameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

W660-0019



IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Manufacturer:

Dates of Survey while building { During progress of work in shops - - }  
{ During erection on board vessel - - - }  
Total No. of visits

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders

Slides

Covers

Pistons

Rods

Connecting rods

Crank shaft

Thrust shaft

Tunnel shafts

Screw shaft

Propeller

Stern tube

Steam pipes tested

Engine and boiler seatings

Engines holding down bolts

Completion of pumping arrangements

Boilers fixed

Engines tried under steam

Completion of fitting sea connections

Stern tube

Screw shaft and propeller

Main boiler safety valves adjusted

Thickness of adjusting washers

Material of Crank shaft

Identification Mark on Do.

Material of Thrust shaft

Identification Mark on Do.

Material of Tunnel shafts

Identification Marks on Do.

Material of Screw shafts

Identification Marks on Do.

Material of Steam Pipes

Test pressure

Is an installation fitted for burning oil fuel *Yes*

Is the flash point of the oil to be used over 150°F.

Have the requirements of Section 49 of the Rules been complied with

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.)

Certificate (if required) to be sent to  
The Surveyors are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee ...

*\$500.00*

When applied for,

*AUG 25 1922*

Special ...

£

:

When received,

Donkey Boiler Fee ...

£

:

Travelling Expenses (if any) £

:

Committee's Minute

*New York AUG 25*

Assigned

*See attached Refr. NNo. 3609*

*J. Hudson Geo. Tully*  
Engineer Surveyor to Lloyd's Register of Shipping.



© 2021

Lloyd's Register  
Foundation