

REPORT ON MACHINERY

No. 115

WED 5-SEP-1917

REC'D NEW YORK

Pro. 15.1917

Received at London Office

CLEVELAND, OHIO.

Date of writing Report 24 Oct 1917 When handed in at Local Office

Port of

No. in Survey held at

Antwerp Ohio

Date, First Survey 12. Jan. 1917

Last Survey 22. Oct 1917

Reg. Book.

on the Screw Steamer, SIDI MABROUK

(Number of Visits 2)

Master

Built at Antwerp

By whom built ST. Lukes Eng. Works

Gross Tons

Net Tons

When built 1917.10

Engines made at Antwerp

By whom made

ST. Lukes Eng. Works

(No. 172)

when made 1917.10

Boilers made at Detroit

By whom made

John Brunner & Co.

when made 1917.

Registered Horse Power

Owners U.S. Shipping Board Emergency Fleet Administration

Port belonging to Washington D.C.

Nom. Horse Power as per Section 28

284

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Triple Compound

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 21" - 34 1/2" - 57"

Length of Stroke 42"

Revs. per minute 83

Dia. of Screw shaft

as per rule 11 1/4"

Material of

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

Joint

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

No

If two

liners are fitted, is the shaft lapped or protected between the liners

No

Length of stern bush 51"

Dia. of Tunnel shaft

as per rule 10 7/8"

Dia. of Crank shaft journals

as per rule 11 1/4"

Dia. of Crank pin 1 1/4"

Size of Crank webs 21" x 8"

Dia. of thrust shaft under

collars 1 1/4"

Dia. of screw 13" - 6"

Pitch of Screw 14" - 6"

No. of Blades 4

State whether moveable

Yes

Total surface 64.5 sq. ft.

No. of Feed pumps 2

Diameter of ditto 4"

Stroke 12"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps 2

Diameter of ditto 3 1/2"

Stroke 12"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines 3

Sizes of Pumps 10x12x12, 10x5x12, 6x4x6

and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 2-4" 3m. 1-3" 3m.

In Holds, &c. 2 1/2" - 2-3" 3m.

2 1/2" - 2-3" 3m.

No. of Bilge Injections 0

Connected to condenser, or to circulating pump C.P.

Is a separate Donkey Suction fitted in Engine room & size 1-3" 6m.

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

No

Are all connections with the sea direct on the skin of the ship

Yes

Are they Valves or Cocks

Both

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

Steam & Winding

How are they protected

Under Deck & clear of Runge

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

Dates of examination of completion of fitting of Sea Connections 20.7.17

of Stern Tube 20.7.17

Screw shaft and Propeller 20.7.17

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

No

worked from

No

BOILERS, &c.—(Letter for record S.)

Manufacturers of Steel

Carnegie Steel Co.

Total Heating Surface of Boilers 4160 sq. ft.

Is Forced Draft fitted

Yes

No. and Description of Boilers

Two Single end.

DETROIT

Working Pressure 175 lb.

Tested by hydraulic pressure to 265 lb.

Date of test 22.7.17

No. of Certificate 52453

Can each boiler be worked separately

Yes

Area of fire grate in each boiler 52 sq. ft.

No. and Description of Safety Valves to

each boiler 2. Spring

Area of each valve 11 sq. in.

Pressure to which they are adjusted 175 lb.

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers on woodwork 7"

Mean dia. of boilers 13" - 6"

Length 11' - 0"

Material of shell plates

Steel

Thickness

Range of tensile strength

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

No

long. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

No

Per centages of strength of longitudinal joint

rivets

Working pressure of shell by rules

Size of manhole in shell

No

Size of compensating ring

No. and Description of Furnaces in each boiler 3. Compound

Material

Outside diameter 44 1/4"

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

End plates in steam space:

Material of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

Material of stays

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of Front plates at bottom

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness

Front

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

Length as per rule

Distance apart

Number and pitch of stays in each

Working pressure by rules

Superheater or Steam chest; how connected to boiler

Can the superheater be shut off and the boiler worked

separately

Diameter

Length

Thickness of shell plates

Material

holes

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

If stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

No

Lloyd's Register

Foundation

WAS - 0018

IS A DONKEY BOILER FITTED? Yes

If so, is a report now forwarded? Yes

SPARE GEAR. State the articles supplied:—

2. 7 in. bearing bolts, 2. bottom end bolts, set of coupling bolts, one crosshead nut, set of fast end big pump nuts, set of piston springs, smaller bolts and nuts.

The foregoing is a correct description,

Great Lakes Engineering Works.

John Russell

Manufacturer.

Dates of Survey while building
During progress of work in shops -- 1917. Apr. 12, 17, May 2, 11, 21, June 7, 15, 21, July 2, 9, 20, 28.
During erection on board vessel -- Aug. 6, 14, 27, Sept. 6, 13, 18, 27, Oct. 3, 16, 22.
Total No. of visits 21.

Is the approved plan of main boiler forwarded herewith? Yes

" " " donkey " " " " Yes

Dates of Examination of principal parts—Cylinders 20.7.17 Slides 28.7.17 Covers 28.7.17 Pistons 28.7.17 Rods 20.7.17
Connecting rods 20.7.17 Crank shaft 7.6.17 Thrust shaft 2.7.17 Tunnel shafts — Screw shaft 2.7.17 Propeller 2.7.17
Stern tube 2.7.17 Steam pipes tested 6.9.17 Engine and boiler seatings 28.5.17 Engines holding down bolts 27.8.17
Completion of pumping arrangements 22.10.17. Boilers fixed 27.8.17. Engines tried under steam 22.10.17.
Main boiler safety valves adjusted 22.10.17. Thickness of adjusting washers 172 Lloyds. Lock nut fitted.

Material of Crank shaft S. Identification Mark on Do. 172 Lloyds. Material of Thrust shaft S. Identification Mark on Do. 172 Lloyds.
Material of Tunnel shafts S. Identification Marks on Do. — Material of Screw shafts S. Identification Marks on Do. 172 Lloyds.
Material of Steam Pipes Steel. Test pressure 525 lb. $^{\circ}$ F.

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? Yes

Is this machinery duplicate of a previous case? Yes If so, state name of vessel S/S. 'BEGNA'.

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

The above engines have been constructed under Special Permit. The materials and workmanship employed in their manufacture so far as can be seen, are sound and good, together with the boilers (built in Detroit) they have been fitted on board the above vessel in a satisfactory manner and found satisfactory under steam. The vessel is eligible in my opinion for record + LMC 10.17.

It is submitted that this vessel is eligible for THE RECORD + LMC 10.17. F.D.

J.M. 8/12/17

The amount of Entry Fee ... \$10.00 :
2/3. Special ... \$114.00 :
FORGINGS.
Donkey Boiler Fee ... \$45.00 :
Travelling Expenses (if any) \$35.50 :
When applied for, 19.1.18
When received, 3.1.18

W. Lane
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute New York NOV 20 1917

Assigned + LMC 10.17 Elec. Light