

pt. 4.

REPORT ON MACHINERY

No. 824

24 FEB. 1920

of writing Report 18-2-1920 When handed in at Local Office

Received at London Office

Port of

CADIZ

in Survey held at

CADIZ

Date, First Survey

26-8-19

Last Survey

28-1-1920

g. Book.

90 on the STEEL S.S. "MENHIR"

(Number of Visits TEN)

Master JUAN M. RUIZ DE AZUA Built at

CADIZ

By whom built

ECHIVARRIETA Y LARRANAGA

Engines made at

BARCELONA

By whom made

ALEXANDER BROS.

when made

1919

Boilers made at

GREENOCK

By whom made

J. G. KINCAID & CO. LTD.

when made

1919

Registered Horse Power

75

Owners

ECHIVARRIETA Y LARRANAGA

Port belonging to

CADIZ

Net Horse Power as per Section 28

74

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

GINES, &c.—Description of Engines TRIPLE EXPANSION

No. of Cylinders

3

No. of Cranks

3

No. of Cylinders

12", 20", 32"

Length of Stroke

24"

Revs. per minute

90

Dia. of Screw shaft

as per rule 7 1/8"

Material of

STEEL

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

Yes

the propeller boss

Yes

If the liner is in more than one length are the joints burned

Yes

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

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

Yes

Length of stern bush

2'-8"

No. of Tunnel shaft

as per rule 6-19"

Dia. of Crank shaft journals

as per rule 6-49"

Dia. of Crank pin

6-49"

Size of Crank webs

4 1/8"

Dia. of thrust shaft under

bars

7 1/4"

Dia. of screw

108"

Pitch of Screw

13-0"

No. of Blades

4

State whether moveable

No

Total surface

31 sq. ft.

No. of Feed pumps

1

Diameter of ditto

27/16"

Stroke

12 1/8"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

1

Diameter of ditto

27/16"

Stroke

12 1/8"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

2

Sizes of Pumps

6" x 6" x 6" BALL - 6" x 4 1/4" x 6"

No. and size of Suctions connected to both Bilge and Donkey pumps

In Holds, &c.

2 of 2" and 3 of 3"

Engine Room

2 of 2 1/4" and 1 of 2"

No. of Bilge Injections

1 size 3"

Connected to condenser, or to circulating pump

Yes

Is a separate Donkey Suction fitted in Engine room & size

2 1/4"

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

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

Yes

Are they Valves or Cocks

Both

Are the Discharge Pipes above or below the deep water line

above

they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Yes

Are the Blow Off Cocks fitted with a spigot and brass covering plate

Yes

How are they protected

Yes

they each fitted with a Discharge Valve always accessible on the plating of the vessel

Yes

all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Yes

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

26-8-19 of Stern Tube

26-8-19

Screw shaft and Propeller

26-8-19

the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

Yes

MLERS, &c.—(Letter for record)

Manufacturers of Steel

al Heating Surface of Boilers

Is Forced Draft fitted

No. and Description of Boilers

Working Pressure

Tested by hydraulic pressure to

Date of test

No. of Certificate

each boiler be worked separately

Area of fire grate in each boiler

No. and Description of Safety Valves to

boiler

Area of each valve

Pressure to which they are adjusted

150 lb. sq. in.

Are they fitted with easing gear

Yes

Forecastle

Least distance between boilers or uptakes and bunkers or woodwork

72"

Mean dia. of boilers

Length

Material of shell plates

Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

Diameter of rivet holes in long. seams

Pitch of rivets

seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

centages of strength of longitudinal joint

Working pressure of shell by rules

Size of manhole in shell

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

Cellular

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Length of stays to ditto: Sides

Back

Top

Bottom

Length

Water

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

Working pressure by rules

Material of stays

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Working pressures by rules

Girders to Chamber tops: Material

Depth and

Thickness of girder at centre

Length as per rule

Distance apart

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

Description of longitudinal joint

Diam. of rivet

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

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

al No. of Visits

14, 23, 4, 19, 5

8, 19, 6, 19, 19

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

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

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

Distance between rings

Working pressure by rules

End plates: Thickness

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IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:— 2 top and 2 bottom end bolts + nuts, 2 main bolts + nuts, 1 set of coupling bolts + nuts, 1 set each, air, feed and bilge pump valves, 1 main and donkey check valve, 1 safety valve spring, 6 firing ring bolts + nuts, 12 condenser tubes, 6 boiler tubes, 6 gauge glasses, 1/2 set of fire bars, assorted bolts, nuts + iron.

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 *TEN* Is the approved plan of main boiler forwarded herewith ☒

Dates of Examination of principal parts—Cylinders ✓ Slides ✓ Covers ✓ Pistons ✓ Rods ✓
Connecting rods ✓ Crank shaft ✓ Thrust shaft *26-8-19* Tunnel shafts ✓ Screw shaft *26-8-19* Propeller *26-8-19*
Stern tube *26-8-19* Steam pipes tested *24-12-19* Engine and boiler seatings *8-11-19* Engines holding down bolts *25-11-19*
Completion of pumping arrangements *20-1-20* Boilers fixed *31-12-19* Engines tried under steam *28-1-20*
Main boiler safety valves adjusted *28-1-20* Thickness of adjusting washers *Port 9/16" Starb. 9/16"*
Material of Crank shaft ✓ 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 *Copper* Test pressure *360 lbs sq. in.*
Is an installation fitted for burning oil fuel *no* 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 *YES* If so, state name of vessel *S.S. "OPHIR"*

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

The machinery of this vessel with the exception of the Boiler has not been constructed under special survey and has now been efficiently fitted in the vessel and tried under steam with satisfactory results and is eligible in my opinion to be classed and to have record of L.M.C. 1-20, subject to boiler pressure not exceeding 150 lbs per sq. inch until Tail Shaft has been renewed.

The amount of Entry Fee ... £ *Positus* When applied for, *18-2-20*
Special ... £ *600.00*
Donkey Boiler Fee ... £
Travelling Expenses (if any) £ *463.00* When received, *18-2-20*

Committee's Minute

Assigned

FRI. 27 FEB. 1920

L. Mc. 1:20

Hyndell

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



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