

## REPORT ON MACHINERY.

No. 242

Received at London Office

Date of writing Report 13<sup>th</sup> January 1925 When handed in at Local Office

Port of Naples

No. in Survey held at  
Reg. Book.Date, First Survey 22<sup>nd</sup> September 1924 Last Survey 10<sup>th</sup> January 1925

74488 on the

Steel Ss. Koefia

(Number of Visits 13 - 2)

Gross 3823

Net 2396

Master

Built at Bremenbaden By whom built Rickmers Akt. Ges.

When built 1903

Engines made at Buckau

By whom made Masch. Buckau A.G.

when made 1903

Boilers made at Buckau

By whom made Masch. Buckau A.G.

when made 1903

Registered Horse Power 1650

Owners Achille Lauro

Port belonging to Naples

Nom. Horse Power as per Section 28

332

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

## ENGINES, &amp;c.—Description of Engines

Triple Expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 23<sup>5</sup>/<sub>8</sub>, 37<sup>1</sup>/<sub>4</sub>, 66<sup>1</sup>/<sub>8</sub>Length of Stroke 43<sup>5</sup>/<sub>16</sub>

Revs. per minute 70

Dia. of Screw shaft

as per rule 13<sup>7</sup>/<sub>8</sub>" Material of screw shaft

steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

two liners

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

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

fit tightly

If two

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

painted

Length of stern bush

56<sup>1</sup>/<sub>8</sub>

Dia. of Tunnel shaft

as per rule 11<sup>8</sup>/<sub>8</sub>"

Dia. of Crank shaft journals

as per rule 12<sup>4</sup>/<sub>8</sub>"

Dia. of Crank pin

as fitted 12<sup>9</sup>/<sub>8</sub>"

Size of Crank webs

46<sup>1</sup>/<sub>8</sub> x 24<sup>1</sup>/<sub>8</sub>

Dia. of thrust shaft under

collars 12<sup>5</sup>/<sub>8</sub>"

Dia. of screw 16'-0"

Pitch of Screw 19'-8"

No. of Blades 4

State whether moveable

yes

Total surface

85 sq ft

No. of Feed pumps 2

Diameter of ditto 3'4"

Stroke 28"

Can one be overhauled while the other is at work

no

No. of Bilge pumps 2

Diameter of ditto 3'4"

Stroke 28"

Can one be overhauled while the other is at work

no

No. of Donkey Engines 3

Sizes of Pumps 8<sup>1</sup>/<sub>2</sub> x 8<sup>1</sup>/<sub>2</sub> x 4<sup>1</sup>/<sub>2</sub>, 6<sup>1</sup>/<sub>2</sub> x 4<sup>1</sup>/<sub>2</sub> x 6<sup>1</sup>/<sub>2</sub>, 6<sup>1</sup>/<sub>2</sub> x 4<sup>1</sup>/<sub>2</sub> x 6<sup>1</sup>/<sub>2</sub>

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

In Engine Room five connections of 3<sup>1</sup>/<sub>4</sub> diam.In Holds, &c. eight connections of 3<sup>1</sup>/<sub>4</sub> diam.No. of Bilge Injections 1 sizes 6<sup>1</sup>/<sub>4</sub>"

Connected to condenser to circulating pump

yes

Is a separate Donkey Suction fitted in Engine room of size 1 of 3<sup>1</sup>/<sub>4</sub>"

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

none

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

yes

Are they Valves or Cocks

valves and 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 forward hold partitions

How are they protected closed ceiling

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

yes

Is it fitted with a watertight door

yes

worked from Top platform

## BOILERS, &amp;c.—(Letter for record)

Manufacturers of Steel

Total Heating Surface of Boilers 5328 sq ft

Is Forced Draft fitted

no

No. and Description of Boilers

three single ended

Working Pressure 185 lbs.

Tested by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately

yes

Area of fire grate in each boiler

51 sq ft

No. and Description of Safety Valves to

each boiler 2 spring loaded

Area of each valve 8'29"

Pressure to which they are adjusted

190 lbs

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

2'-0"

Mean dia. of boilers 13'-1<sup>1</sup>/<sub>2</sub>"Length 10'-6<sup>1</sup>/<sub>8</sub>"

Material of shell plates

steel

Thickness 1'14"

Range of tensile strength 28

Are the shell plates welded or flanged

yes

Descrip. of riveting: cir. seams

double

long. seams I.B.P.-Q.R.

Diameter of rivet holes in long. seams 1'33"

Pitch of rivets 16'34"

Lap of plates on width of butt straps

25'19"

Per centages of strength of longitudinal joint

rivets 122

plate 91

Working pressure of shell by rules

305 197

Size of manhole in shell 15'74" x 11'81"

Material steel

Outside diameter 37'40"

Size of compensating ring 7'87" x 1'14"

No. and Description of Furnaces in each boiler

3 Morison

Material steel

No. of strengthening rings

No.

Length of plain part

top 7'32"

Thickness of plates

crown 5'7"

Description of longitudinal joint

No.

No. of strengthening rings

No.

Working pressure of furnace by the rules 240

Combustion chamber plates: Material steel

Thickness: Sides 6'29"

Back 6'4"

Top 6'2"

Bottom 6'2"

Working pressure by rules 242

Pitch of stays to ditto: Sides 7'08"

Back 7'08"

Top 7'08"

If stays are fitted with nuts or riveted heads

painted

Working pressure by rules 271

End plates in steam space:

Material of stays steel

Area at smallest part 1'75"

Area supported by each stay 50'42"

Working pressure by rules 271

Material of stays steel

Thickness 1'02"

Pitch of stays 15'74"

How are stays secured washed 2 mths

Working pressure by rules 146

Material of Front plates at bottom steel

Area at smallest part 5'41"

Area supported by each stay 247'74"

Working pressure by rules 196

Material of Front plates at bottom steel

Thickness 1'02"

Greatest pitch of stays 19'68"

Working pressure of plate by rules 261

Thickness 1'14"

Material of Lower back plate steel

Thickness 1'14"

Mean pitch of stays 8'66"

Diameter of tubes 3'26"

Pitch of tubes 4'33"

Material of tube plates steel

Thickness: Front 1'02"

Back 93"

Girders to Chamber tops: Material steel

Pitch across wide water spaces 13'97"

Working pressures by rules 408

Girders to Chamber tops: Material steel

Depth and

thickness of girder at centre 7'08" x 94" x 2

Length as per rule 29'52"

Distance apart 7'08"

Number and pitch of stays in each 3 x 8'36"

% of strength of joint

Working pressure by rules 236

Steam dome: description of joint to shell

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

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

Tested by Hydraulic Pressure to

2020

## SUPERHEATER. Type

Date of Approval of Plan

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

Diameter of Safety Valve

Lloyd's Register

Foundation

11215-0064



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— One slide valve rod, air pump rod, water circulating pump rod, 1 pair of connecting rod brasses, 2 pair of cross-head brasses, 1 eccentric strap, 1 crank pin, 1 guide block, 1 set of link brasses, 2 main bearing bolts, 4 connecting rod bolts, 22 coupling bolts, 1 set of feet and bidge pump valves, 1 set of piston springs, 1 plain tube, 3 safety valve springs, condenser tube, a quantity of assorted bolts and nuts and iron of various sizes.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } 1924, Sept. 22, 23, 24 Oct 1, 7, 8, 14, 16, Dec. 11, 15, 31 - 1925, Jan. 3 & 10. -  
{ During erection on board vessel -- }  
Total No. of visits 13. -

Is the approved plan of main boiler forwarded herewith yes

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 10-1-25 Thickness of adjusting washers for B-1/16, 7/8 per B.-7/8, 1/2 per B. 1/8, 1"  
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 Copper ✓ Test pressure 370 lbs. ✓  
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 ✓ If so, state name of vessel ✓

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

The machinery of this vessel has been examined and found in accordance with the Rules. The material and workmanship are good, and after examination, the engine and boilers were tried under full working condition with satisfactory results. The machinery of this vessel is eligible in my opinion to bear the notation of LMC-1, 25, and screw shaft per 1, 25. -

Wireless telegraphy and electric light fitted.

Approved plans are being forwarded under separate cover.

Certificate (if required) to be sent to The Master of the Vessel

The amount of Entry Fee ... £ : : When applied for.

Special ... £ 2088

Donkey Boiler Fee ... £ : : When received.

Travelling Expenses (if any) £ 35. -

Committee's Minute

FRI. 13 FEB 1925

FRI. 6 MAR 1925

Assigned

TUES. 21 APR 1925

FRI. 3 JUL 1925

Engineer Surveyor to Lloyd's Register of Shipping.



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TUES. 3 NOV 1925

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