

REPORT ON MACHINERY.

No. 175

Port of Leghorn

Received at Leghorn 6 MAY 1903

No. in Survey held at
Reg. Book.

Leghorn

Date, first Survey

Feb 8th 1902

Last Survey

15th April 1903

on the

S. S. "Sicania"

(Number of Visits ?)

Master Masfardo

Built at

Leghorn

By whom built

Messrs Orlando Bros

Tons

Gross 4435.47

When built

1903

Engines made at

Leghorn

By whom made

Messrs Orlando Bros

when made

do

Boilers made at

do

By whom made

do

when made

do

Registered Horse Power

302

Owners

H. Peirce

Port belonging to

Messina

Nom. Horse Power as per Section 28

302

Is Refrigerating Machinery fitted

no

Is Electric Light fitted

no

ENGINES, &c.

Description of Engines

Triple expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

31.18 - 63

Length of Stroke

39.3

Revs. per minute

85

Dia. of Screw shaft

as per rule 11.6

Material of

screw shaft

Is 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

Is the propeller boss

no

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

yes

If two

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

yes lapped at the ends of liners

Length of stern bush

56.2

Dia. of Tunnel shaft

as per rule 10.9

10.8

Dia. of Crank shaft journals

as per rule 11.5

11.33

Dia. of Crank pin

11.8

Size of Crank webs

13.2 x 7.48

Dia. of thrust shaft under

collars

11.4

Dia. of screw

16.8 3/4

Pitch of screw

14.7

No. of blades

4

State whether moveable

no

Total surface

74.3

74.5

No. of Feed pumps

2

Diameter of ditto

3.34

Stroke

22.05

Can one be overhauled while the other is at work

no

No. of Bilge pumps

2

Diameter of ditto

3.34

Stroke

22.05

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

2

Sizes of Pumps

8.97 x 8.66 x 8.97

Ballast

8.97 x 5.98 x 8.97

Head

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

In Engine Room

three 3 1/2 diam

In Holds, &c.

No 1 two 3 1/2

No 2 two 3 1/2

Deep tank

two 3 1/2

No 3 two 3 1/2

No 4 two 3 1/2

Tunnel well one 3 1/2

No. of bilge injections

one sizes 10"

Connected to condenser, or to circulating pump

yes

Is a separate donkey suction fitted in Engine room & size

yes

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

yes

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

those to the fore holds

How are they protected

wooden casing

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

When were stern tube, propeller, screw shaft, and all connections examined in dry dock

before launching

Is the screw shaft tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from

Upper platform

BOILERS, &c.—

(Letter for record S)

Total Heating Surface of Boilers

5080

Is forced draft fitted

no

No. and Description of Boilers

2 cylindrical multitubular

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

3/1/03

Can each boiler be worked separately

yes

Area of fire grate in each boiler

77.5

No. and Description of safety valves to

each boiler

2 spring

Area of each valve

9.8

Pressure to which they are adjusted

180 lbs

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

12"

Mean dia. of boilers

181.1

Length

10'

Material of shell plates

steel

Thickness

1 1/4"

Range of tensile strength

27-32

Are they welded or flanged

no

Descrip. of riveting: cir. seams

double outside

double inside

long. seams

5 rivets

for pitch

Diameter of rivet holes in long. seams

1 3/8"

Pitch of rivets

9 1/2"

Lap of plates or width of butt straps

20 1/2"

Per centages of strength of longitudinal joint

rivets 92.8

plate 85.7

Working pressure of shell by rules

179 lbs

Size of manhole in shell

15" x 11"

Size of compensating ring

5 1/2" x 7 1/8"

No. and Description of Furnaces in each boiler

4 Fox's

Material

steel

Outside diameter

48 3/4"

Length of plain part

top 1"

bottom 1"

Thickness of plates

crown 1"

bottom 1"

Description of longitudinal joint

welded

No. of strengthening rings

none

Working pressure of furnace by the rules

174.5

Combustion chamber plates: Material

steel

Thickness: Sides

3/8"

Back

1/2"

Top

3/16"

Bottom

3/16"

Pitch of stays to ditto: Sides

7.08 x 7.08

Back

6.64 x 6.64

Top

7.08 x 7.08

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

218 lbs

End plates in steam space:

215 lbs

Material of stays

steel

Diameter at smallest part

1 1/4"

Area supported by each stay

50" dia

Working pressure by rules

208 lbs

End plates in steam space:

170 lbs

Material

steel

Thickness

55"

Pitch of stays

14.9 x 14.7

How are stays secured

220 cast

Working pressure by rules

196.75

Material of stays

steel

Diameter at smallest part

2 5/16"

Area supported by each stay

211"

Working pressure by rules

176.5

Material of Front plates at bottom

steel

Thickness

53"

Material of Lower back plate

steel

Thickness

45"

Greatest pitch of stays

14.6 x 6.7

Working pressure of plate by rules

180 lbs

Diameter of tubes

3 1/4"

Pitch of tubes

4.3 x 4.3

Material of tube plates

steel

Thickness: Front

35"

Back

35"

Mean pitch of stays

8.6"

Pitch across wide water spaces

12.7"

Working pressures by rules

178 lbs

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

6.3 x 1.26

Length as per rule

22.8

Distance apart

7.08

Number and pitch of Stays in each

2 - 7.08

Working pressure by rules

198.5

Superheater or Steam chest; how connected to boiler

none

Can the superheater be shut off and the boiler worked

separately

yes

Diameter

yes

Length

DONKEY BOILER— No. *one* Description *Horizontal Multitubular*
 Made at *Leghorn* By whom made *Mrs Orlando Broi* When made *1903* Where fixed *on main deck*
 Working pressure *100* tested by hydraulic pressure to *200* No. of Certificate *285* Fire grate area *28.5* Description of safety valves *Spring*
 No. of safety valves *2* Area of each *5.5* Pressure to which they are adjusted *100* If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *no* Dia. of donkey boiler *9'-2 1/4"* Length *9'-2 1/4"* Material of shell plates *steel* Thickness *1/2"* Range of tensile strength *26-32* Descrip. of riveting *double riveted* Dia. of rivet holes *.86"* Whether punched or drilled *yes* Pitch of rivets *3.34*
 Width of butt straps *1"* Rivets *98%* Thickness of shell crown plates *3/4" x 19/32"* Radius of do. *flat* No. of Stays to do. *✓*
 Lap of plating *8.6* Per centage of strength of joint *74%* Plates *74%* Stays *7.08"* Thickness of furnace plates *.48"* Description of joint *welded* Thickness of *combustion chamber* *15"* Stayed by *1" dia. stays steel pitch* Working pressure of shell by rules *106* lbs
 Dia. of stays *1 1/16"* Diameter of furnace *Top outside Bottom 32"* Length of furnace *45"* Thickness of furnace plates *.48"* Description of joint *welded* Thickness of *combustion chamber* *15"* Stayed by *1" dia. stays steel pitch* Working pressure of shell by rules *106* lbs
 Working pressure of furnace by rules *155* lbs Diameter of uptake *3"* Thickness of uptake plates *3/4" x 11/16"* Thickness of water tubes *✓*

SPARE GEAR. State the articles supplied:— *2 top end and 2 bottom end bolts & nuts of connecting rod, one set of coupling bolts, one set of main bearing bolts & nuts - one set of S.P. piston springs, one set of feed & bilge pump valves, bolts & nuts of fork & iron of different size.*
 The foregoing is a correct description,

J. M. P.

Manufacturer.

Dates During progress of work in shops - *1903* *Dec 8 - 1903 Jan 27 March 24 = 24. G. Parrini Dec 8 - 11 - 15 - 18 Jan 5 - 8 - 14 - 19 - 27 Feb 6 - 11 - 17 - 24*
 of Survey During erection on board vessel - *1903* *March 5 - 9 - 14 - 16 - 24 - 30 April 4 - 8 - 11 - 15 - 19 trial - 21 - 24 - 26 trial - 30 trial*
 while building Total No. of *28* s

Is the approved plan of main boiler forwarded herewith *yes*

" " " donkey " " " *yes*

General Remarks (State quality of workmanship, opinions as to class, &c. *This vessel's machinery was made and almost completed before the builder decided to have it classed.*
The workmanship and materials are good. The boilers have been examined, compared with the approved plans, & found to agree with the same; they have been tested to double the working pressure & found tight & sound. The engines have been adjusted to the working pressure under steam.
The vessel is therefore eligible in our opinion to be classed as regards the machinery, and to have the notation of L.M.C. 4:03 made in the R. Book.

Note. Arrangements have been made to prevent the deep tank from being flooded when used for cargo space, also to enable this to be drained when used in that capacity. G. Parrini

It is submitted that
 this vessel is eligible for
 THE RECORD L M C 4:03

6.5.03
7.5.03

The amount of Entry Fee. £ 3 : 0 :
 Special £ 35 : 2 :
 Donkey Boiler Fee £ 2 : 2 :
 Travelling Expenses (if any) £ : :
 £ 40-4-

When applied to,

When received,

Committee's Minute

Assigned

L M C 4:03

TUES. 19 JAN 1904

MACHINERY CERTIFICATE
 WRITTEN.

Francis Pittson

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

Giovanni Parrini
Marine Engineer



Lloyd's Register
 Foundation

Leghorn Office

Certificate (if required) to be sent to