

REPORT ON MACHINERY.

No. 25632

WED. MAR. 26 1913

Date of writing Report

19

When handed in at Local Office

11. 3 10/13 Port of

Received at London Office

Sunderland.

No. in Survey held at
Reg. Book.

Date, First Survey

19 Nov.

Last Survey

17 March 1913

on the

Steel S.S. "Iossifoglu"

Master

C. S. Theophilatos

Built at

Sunderland

By whom built

R. Thompson & Sons Ltd

Tons

Gross 3560

Net 2167

When built

1913

Engines made at

Sunderland

By whom made

North Eastern Marine Eng Co Ltd

when made

1913

Boilers made at

do

By whom made

do

when made

1913

Registered Horse Power

Owners

Socrates Iossifoglu

Port belonging to

Piræus

Nom. Horse Power as per Section 28

321

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

ENGINES, &c.—Description of Engines

Triple expansion

No. of Cylinders

Three

No. of Cranks

Three

Dia. of Cylinders

24" x 10" x 6"

Length of Stroke

45

Revs. per minute

65

Dia. of Screw shaft

as per rule 13.9

Material of screw shaft

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

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

Length of stern bush

4'-8"

Dia. of Tunnel shaft

as per rule 12.9

Dia. of Crank shaft journals

as per rule 12.9

Dia. of Crank pin

13"

Size of Crank webs

20" x 8"

Dia. of thrust shaft under

collars

13"

Dia. of screw

14'-0"

Pitch of Screw

14'-3"

No. of Blades

4

State whether moveable

no

Total surface

914'

No. of Feed pumps

Two

Diameter of ditto

3"

Stroke

24"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

Two

Diameter of ditto

4"

Stroke

24"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

Two

Sizes of Pumps

1" x 9" x 9"

6" x 4" x 6"

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

In Engine Room

Three @ 3" dia

In Holds, &c.

Two @ 3" in each hold

No. of Bilge Injections

1

sizes

4"

Connected to condenser, or to circulating pump

yes

Is a separate Donkey Suction fitted in Engine room & size

yes 3"

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

Hold suction

How are they protected

wood casings

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

10-2-13

of Stern Tube

24-2-13

Screw shaft and Propeller

24-2-13

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from top platform

OILERS, &c.—(Letter for record)

Manufacturers of Steel

Spencer & Sons Ltd

Total Heating Surface of Boilers

5300

Is Forced Draft fitted

no

No. and Description of Boilers

Two single ended

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

28-1-13

No. of Certificate

3084

Can each boiler be worked separately

yes

Area of fire grate in each boiler

65 sq ft

No. and Description of Safety Valves to

each boiler

Two spring loaded

Area of each valve

7.068

Pressure to which they are adjusted

185 lbs

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

18"

Mean dia. of boilers

16'-6"

Length

11'-0"

Material of shell plates

Steel

Thickness

1 1/4"

Range of tensile strength

28 1/2 & 32 1/2

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

D.R.

long. seams

T.R.D.B.S.

Diameter of rivet holes in long. seams

1 1/2"

Pitch of rivets

9 1/4"

Top of plates or width of butt straps

20 1/2"

Per centages of strength of longitudinal joint

rivets 86.5

plate 86.2

Working pressure of shell by rules

180 lbs

Size of manhole in shell

16" x 12"

Size of compensating ring

dished

No. and Description of Furnaces in each boiler

Three Cor.

Material

Steel

Outside diameter

4'-2 1/2"

Length of plain part

top

bottom

Thickness of plates

crown

bottom

Description of longitudinal joint

welded

No. of strengthening rings

25

Working pressure of furnace by the rules

180 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

3/4"

Back

3/4"

Top

3/4"

Bottom

3/4"

Pitch of stays to ditto: Sides

11 1/8" x 9"

Back

11 1/8" x 10 1/2"

Top

9" x 11"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

180 lbs

End plates in steam space:

Material of stays

Steel

Diameter at smallest part

2 1/4"

Area supported by each stay

104.6 lbs

Working pressure by rules

180 lbs

Material of stays

Steel

Material

Steel

Thickness

1 1/2"

Pitch of stays

23 1/8" x 23 1/8"

How are stays secured

D.H. wash

Working pressure by rules

184 lbs

Material of Front plates at bottom

Steel

Diameter at smallest part

9.62"

Area supported by each stay

543.4"

Working pressure by rules

184 lbs

Material of Front plates at bottom

Steel

Working pressure of plate by rules

180 lbs

Material of Lower back plate

Steel

Thickness

3/4"

Material of Lower back plate

Steel

Thickness

15"

Greatest pitch of stays

14 1/2" x 11 1/4"

Working pressure of plate by rules

180 lbs

Material of Front plates at bottom

Steel

Diameter of tubes

3 1/4"

Pitch of tubes

4 1/2" x 4 1/2"

Material of tube plates

Steel

Thickness: Front

3/4"

Back

3/4"

Mean pitch of stays

10 1/8"

Pitch across wide water spaces

14 1/2"

Working pressures by rules

192.7 lbs

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

20 1/2" x 1"

Length as per rule

37 1/2"

Working pressure by rules

183 lbs

Superheater or Steam chest; how connected to boiler

none

Can the superheater be shut off and the boiler worked

separately

yes

Description of longitudinal joint

Diam. of rivet

separately

Diam. of rivet

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

separately

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Pitch of rivets

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. _____ Description _____
 Made at _____ By whom made _____ When made _____ Where fixed _____
 Working pressure _____ tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of St. in _____
 Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____
 If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____ Dia. of donkey boiler _____ Length _____
 Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long. seams _____
 Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____
 Working pressure of shell by rules _____ Thickness of shell crown plates _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____
 Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____
 Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Radius of do. _____ Stayed by _____
 Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— Two each bolts & nuts for top & bottom ends and main bearings. One set coupling bolts, valves for feed & bilge pumps are set each. One solid best iron propeller. Assorted bolts nuts & riv. ✓

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building
 During progress of work in shops -- 1912 Nov. 19. 26. Dec. 5. 6. 12. 16. 17. 20. 24. 27. 31. Jan. 8. 9. 10. 16. 17. 21. 22. 23. 24. 27. 28. 29. 30.
 During erection on board vessel --- Feb. 4. 10. 11. 13. 14. 18. 24. 25. 26. Mar. 5. 17.
 Total No. of visits 35

Is the approved plan of main boiler forwarded herewith yes
 " " " donkey " " " yes

Dates of Examination of principal parts—Cylinders 29-1-13 Slides 4-2-13 Covers 21-1-13 Pistons 21-1-13 Rods 20-12-1
 Connecting rods 20-12-13 Crank shaft 16-1-13 Thrust shaft 16-1-13 Tunnel shafts 16-1-13 Screw shaft 18-2-13 Propeller 4-2-13
 Stern tube 11-2-13. Steam pipes tested 24-2-13 Engine and boiler seatings 10-2-13. Engines holding down bolts 28-2-13
 Completion of pumping arrangements 14-3-13 Boilers fixed 28-2-13 Engines tried under steam 5-3-13
 Main boiler safety valves adjusted 5-3-13. Thickness of adjusting washers 8 Bl F 1/2" A 1/2" 9 Bl A 1/2" F 1/2"
 Material of Crank shaft Steel Identification Mark on Do. 4246 HK Material of Thrust shaft Steel Identification Mark on Do. 2143 N
 Material of Tunnel shafts Steel Identification Marks on Do. 142, 143, & 204 J.D. Material of Screw shafts Steel Identification Marks on Do. 1322 J.
 Material of Steam Pipes Lapwelded wrought iron 1/2" & 3/4" thick Test pressure 540 lbs.

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

The Machinery of this vessel has been built under special survey. The material and workmanship are of good quality and the hydraulic tests of the boilers proved satisfactory. The whole of the machinery has been recently fired on board & tried under steam & is in good & safe working condition and eligible in my opinion to be classed & have record. ✠ LMC. 3- in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 3. 13.

JMT EJS
 28. 3. 13.

The amount of Entry Fee .. £ 3 : 0 : 0 When applied for.
 Special £ 36 : 11 : 0 25. 3. 13
 Donkey Boiler Fee £ : : : When received, 2/4/13
 Travelling Expenses (if any) £ : : : 3

Committee's Minute FRI MAR 28 1913

Assigned + LMC 3. 13

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



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MACHINERY CERTIFICATE WRITTEN