

REPORT ON MACHINERY.

Port of Trieste

THUR. 19 JUN 1902

Received at London Office

No. in Survey held at
Reg. Book.

Trieste

Date, first Survey 10th May 1901 Last Survey 16th June 1902

(Number of Visits)

on the

Single Screw Steamer "Galicia"

Gross 2836
Net 1746

When built 1902. 4.

Master

Built at Trieste

By whom built Lloyd's Arsenal

when made 1902. 4.

Engines made at

Trieste

By whom made Lloyd's Arsenal

when made 1902. 4

Boilers made at

Dumbarton

By whom made Lloyd's Arsenal

Registered Horse Power

Owners Lloyd Austriaco

Port belonging to Trieste

Nom. Hors. Power as per Section 28 354.5

Is Refrigerating Machinery fitted

Is Electric Light fitted

Engines, &c.—Description of Engines Triple expansion

No. of Cylinders Three No. of Cranks 3.

Dia. of Cylinders 23 $\frac{1}{2}$, 39 $\frac{1}{2}$ + 65 $\frac{1}{2}$ Length of Stroke 45 $\frac{1}{2}$ Revs. per minute 76 Dia. of Screw shaft 13 $\frac{1}{2}$ as per rule 13 $\frac{1}{2}$ as fitted 15 Lgth. of stern bush 14.08
 Dia. of Tunnel shaft 12 $\frac{1}{2}$ as per rule 12 $\frac{1}{2}$ as fitted 12 $\frac{1}{2}$ Dia. of Crank shaft journals 12 $\frac{1}{2}$ as per rule 12 $\frac{1}{2}$ as fitted 13 $\frac{1}{8}$ Dia. of Crank pin 13 $\frac{1}{8}$ Size of Crank webs 9 Dia. of thrust shaft under
 collars 13 $\frac{1}{8}$ Dia. of screw 15 $\frac{1}{8}$ Pitch of screw 18 $\frac{1}{2}$ 6 $\frac{1}{2}$ No. of blades 4 State whether moveable yes Total surface 24 $\frac{1}{2}$

No. of Feed pumps 2 Diameter of ditto 3 $\frac{1}{2}$ Stroke 23 Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 4 Stroke 23 Can one be overhauled while the other is at work yes

No. of Donkey Engines 3 Sizes of Pumps see remarks next page No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room three of 4 $\frac{1}{2}$ inch diameter In Holds, &c. 10 size 3 $\frac{1}{2}$ inch diameter 2 bilges

No. of bilge injections 1 sizes 11 $\frac{1}{2}$ Connected to condenser, to circulating pump yes Is a separate donkey suction fitted in Engine room & size yes one 2 $\frac{1}{2}$

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
 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 yes

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 none How are they protected

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 (safety cocks)

When were stern tube, propeller, screw shaft, and all connections examined in dry dock Is the screw shaft tunnel watertight yes
 Is it fitted with a watertight door yes worked from top platform.

OILERS, &c.— (Letter for record T) Total Heating Surface of Boilers 4634 sq feet Is forced draft fitted Yes.

No. and Description of Boilers Two Cylind. Mult. Single End Working Pressure 200 lb Tested by hydraulic pressure to 400 lb.
 Date of test 23/4. Can each boiler be worked separately Yes Area of fire grate in each boiler 56.4 sq ft No. and Description of safety valves to

each boiler 1 double spring Area of each valve 7.66 sq ft Pressure to which they are adjusted 205 lb Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 15 $\frac{1}{2}$ Mean dia. of boilers 14 $\frac{1}{2}$ 9 $\frac{1}{2}$ Length 11 $\frac{1}{2}$ 10 $\frac{1}{2}$ Material of shell plates Steel

Thickness 1 $\frac{1}{16}$ Range of tensile strength 29-32 Are they welded or flanged no Descrip. of riveting: cir. seams Ends double R Middle Tucklong. seams J.B.S. T.R.
 Diameter of rivet holes in long. seams 1 $\frac{1}{16}$ Pitch of rivets 9 $\frac{1}{2}$ 4 $\frac{1}{2}$ Lap of plates or width of butt straps 21 $\frac{1}{2}$ X 1 $\frac{1}{2}$ X 1 $\frac{1}{2}$

Per centages of strength of longitudinal joint rivets 93 plate 84.2 Working pressure of shell by rules 227 lb Size of manhole in shell 16 $\frac{1}{2}$ X 12 $\frac{1}{2}$
 Size of compensating ring 8 $\frac{3}{4}$ 1 $\frac{1}{16}$ No. and Description of Furnaces in each boiler 3 Deighton & Material steel Outside diameter 47 $\frac{1}{2}$

Length of plates top 8 $\frac{1}{2}$ 5 $\frac{1}{2}$ Thickness of plates crown 5 $\frac{1}{8}$ Description of longitudinal joint Weld No. of strengthening rings none
 Working pressure of furnace by the rules 213 lb Combustion chamber plates: Material Steel Thickness: Sides 5 $\frac{1}{8}$ Back 5 $\frac{1}{8}$ Top 1 $\frac{1}{16}$ Bottom 7 $\frac{1}{8}$

Pitch of stays to ditto: Sides 7 $\frac{1}{2}$ X 8 Back 7 $\frac{1}{2}$ X 7 $\frac{1}{2}$ Top 7 $\frac{1}{2}$ X 7 $\frac{1}{2}$ If stays are fitted with nuts or riveted heads Nut & W. Working pressure by rules 218 lb
 Material of stays 1/20 Diameter at smallest part 1 $\frac{1}{4}$ 1 $\frac{1}{8}$ 1 $\frac{1}{4}$ supported by each stay 63 $\frac{1}{2}$ Working pressure by rules 241 End plates in steam space:

Material Steel Thickness 1 $\frac{1}{2}$ Pitch of stays 15 $\frac{1}{2}$ X 15 $\frac{1}{2}$ How are stays secured D.N. & W. Working pressure by rules 208 lb Material of stays Steel.
 Diameter at smallest part 2 $\frac{1}{2}$ Area supported by each stay 241 Working pressure by rules 233 lb Material of Front plates at bottom steel

Thickness 1 $\frac{1}{16}$ Material of Lower back plate Steel Thickness 1 $\frac{1}{8}$ Greatest pitch of stays 13 $\frac{1}{2}$ Working pressure of plate by rules 254 lb
 Diameter of tubes 2 $\frac{1}{2}$ Pitch of tubes 3 $\frac{1}{2}$ X 3 $\frac{1}{2}$ Material of tube plates Steel Thickness: Front 3 $\frac{1}{2}$ Back 3 $\frac{1}{4}$ Mean pitch of stays 7 $\frac{3}{4}$

Pitch across wide water spaces 13 $\frac{1}{2}$ Working pressures by rules 50 lb 336 lb Orders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 9 $\frac{1}{2}$ X 1 $\frac{1}{4}$ Length as per rule 32 $\frac{1}{2}$ Distance apart 7 $\frac{1}{2}$ Number and pitch of Stays in each 5 X 7 $\frac{1}{2}$

Working pressure by rules 227 lb Superheater or Steam chest; how connected to boiler none 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

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

DONKEY BOILER— No. *31* Description *Cylind. Mult. with one No. 1 boiler & furnace.*
Made at *Trieste* By whom made *Stabilimento Tecnico Triestino* When made *1902.3* Where fixed *to Deck B. in*

Working pressure *165 lb* tested by hydraulic pressure to *330* No. of Certificate *2* Fire grate area *20.4* Description of safety valves *Spring*

No. of safety valves *1* dia. of each *5.41"* Pressure to which they are adjusted *165 lb* If fitted with easing gear *yes* If steam from main boilers *no*

enter the donkey boiler *no* Dia. of donkey boiler *8.11 1/2"* Length *8.6 3/4"* Material of shell plates *Steel* Thickness *3/32"* Range of ten

strength *28-32* Descrip. of riveting long. seams *J.B.S - T.R* Dia. of rivet holes *1"* Whether punched or drilled *drilled* Pitch of rivets *5 1/2"*

J.B.S *13 3/4"* Per centage of strength of joint Rivets *11/16"* Thickness of shell plates *3/32"* Radius of do. *Flat* No. of Stays to do. *11* Master

Dia. of stays *2 1/2"* Diameter of furnace *Top 48 1/4" Bottom 48"* Length of furnace *6 feet* Thickness of furnace plates *9/16"* Description

joint *Weld* Thickness of furnace crown plates *9/16"* Stayed by *1 1/2" Iron 7x12-7x12-7x12* Working pressure of shell by rules *207*

Working pressure of furnace by rules *169 lb* Diameter of uptake *8 1/4"* Thickness of uptake plates *1/2"* Thickness of water tubes *3/32"* Plate *1/2"*

SPARE GEAR. State the articles supplied:— *2 connecting rod top end bolts & nuts, 2 connecting rod bottom bolts & nuts, 2 main bearing bolts, 1 set*

of coupling bolts, 1 set of feet & bilge pump valves, 1 set of piston spring

each piston, 1 full set of propeller blades (brass) 1 pair of connecting

brasses 1 pair of cross head brasses, 1 set of link bushes 2 bearing

straps complete, 1 air pump rod, one H.P. one L & J.P. valve spindle

3 dozen of bolts, 3 dozen of boiler tubes, 1 set of safety valves springs, 1

set of bolts & nuts & others.

The foregoing is a correct description,

F. Rodalchini Manufacturer.

1901 May 10. 22. June 4. 15. 31. July 7. 17. 21. Aug 10. 16. 26. 31

Sep 18. 27. Oct. 10. 25. Nov 19. 27. Dec. 6. 11. 18. 23. — 1902

Jan. 9. 18. 24. Feb 3. 12. 25. March 11. 17. 21.

April 13. 17. 21. 24. May 6. 12. 16. 20. 27. June 6. 13. 16.

Total No. of visits *43.*

The approved plan of main boiler forwarded herewith *Rep. d.*

The approved plan of Donkey Boiler *is forwarded herewith but it is required*

same to be returned to this office.

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

The machinery & Boilers of this vessel have been constructed under Special

Survey and are of good material & in accordance with the Rules of this Society.

Special attention was given to the workmanship which is of a high class.

Engine & Boilers have been securely fitted on board & satisfactory work

*under steam. In my opinion it is eligible to have record of **LMC 4.02***

FD noted in the R. Book.

All steel shafting, forged at the Steel Works of Witkowski &

tested by the Surveyor of this Society and made according

to the Rules.

The Boilers are stamped as below.

Main Boilers

Donkey Boiler.

No 31

No 32

No 30

LLOYD'S TEST

400 lbs

23.4.902 R.D.

23.4.902 R.D.

22.3.902 R.D.

Pumps

No 1 Centrifugal pump for circulating water into the Condenser

No 2 Weir's Vertical duplex piston for feeding Boilers 7 1/2 x 9 1/2 x 12

No 3 Black duplex piston pump 9 x 6 x 10 for ballast & water

No 4 4 1/2 x 3 x 4 for feeding D. Boiler

The Report on Electric Lighting will be sent in due course.

The amount of Entry Fee... £ 3 : : When applied for,

Special ... £ 37 : 14 : 16th June 1902

Donkey Boiler Fee ... £ 2 : 2 : When received,

Travelling Expenses (if any) £ : 6 : 18th June 1902

Committee's Minute

Assigned

FRI. 20 JUN 1902

+ LMC 602 FD

MACHINERY CERTIFICATE

WRITTEN 20/6/02

Robt Dunsick

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

Lloyd's Register Foundation