

# REPORT ON MACHINERY.

No. 1736

Port of

*Trieste*

Received at London Office

MON. 23 SEP 1907

No. in Survey held at

*Trieste*

Date, first Survey

*17 Sept 1906*

Last Survey

*14 Sept 1907*

Book.

18 on the

*S. S. Baron Beck*

(Machinery & Boilers)

(Number of Visits *67*)

Tons

Gross *3890*

Net *2384*

ster *D. Mistrorigo* Built at

*Trieste*

By whom built *Lloyd Austriaco*

When built *1907*

ines made at

*Trieste*

By whom made

*Lloyd Austriaco*

when made *1906-7*

lers made at

*Trieste*

By whom made

*Lloyd Austriaco*

when made *1907*

istered Horse Power *432*

Owners

*Lloyd Austriaco*

Port belonging to

*Trieste*

n. Horse Power as per Section 28

Is Refrigerating Machinery fitted for cargo purposes

*No*

Is Electric Light fitted

*Yes*

GINES, &c.—Description of Engines

*Triple expansion surface condensing* of Cylinders

*3 1/2*

No. of Cranks *3*

of Cylinders *24 1/2 x 40 1/2 x 68*

Length of Stroke *48*

Revs. per minute *84*

Dia. of Screw shaft

as per rule *13.96*

Material of screw shaft *Iron*

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

the propeller boss

*Yes*

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

*—*

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

*No*

If two

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

Length of stern bush *44*

of Tunnel shaft

as per rule *12.87*

Dia. of Crank shaft journals

as per rule *13.51*

Dia. of Crank pin

*13 3/4*

Size of Crank webs *9 x 19 1/2*

Dia. of thrust shaft under

bars *13 1/2*

Dia. of screw

*16 1/2*

Pitch of Screw

*18 1/2*

No. of Blades *4*

State whether moveable

*Yes*

Total surface *76.6*

of Feed pumps *2*

Diameter of ditto *4*

Stroke *24*

Can one be overhauled while the other is at work

*Yes*

of Bilge pumps *2*

Diameter of ditto *4*

Stroke *24*

Can one be overhauled while the other is at work

*Yes*

of Donkey Engines *2*

Sizes of Pumps

*8 x 8 x 8; 5 x 5 x 6*

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

Engine Room *4 of 3 1/2 diameter*

In Holds, &c. *(12) of 3 1/2 diam.*

No. 1 - 2, No. 2 - 2, No. 3 - 1, No. 4 - 2, No. 5 - 2, 1 after hold 3 1/2, 1 - 2 1/2, fore peak 1 - 2 1/2

Is a separate Donkey Suction fitted in Engine room & size *Yes, 2 - 3 1/2 in.*

of Bilge Injection

*1 sizes 12*

Connected to *circulating pump*

Are the roses in Engine room always accessible

*Yes*

Are the sluices on Engine room bulkheads always accessible

*None*

Are all the bilge suction pipes fitted with roses

*Yes*

Are the roses in Engine room always accessible

*Yes*

Are they Valves or Cocks

*Valves*

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

*Yes*

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*

How are they protected

*no pipes*

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

*4.7.07*

of Stern Tube

*29.6.07*

Screw shaft and Propeller

*4.7.07*

Is the Screw Shaft Tunnel watertight

*Yes*

Is it fitted with a watertight door

*Yes*

worked from *Deck*

MILERS, &c.—(Letter for record *r*)

Manufacturers of Steel

*Lanarkshire, Colville & Co of Scotland*

Total Heating Surface of Boilers *6000*

Is Forced Draft fitted

*Yes*

No. and Description of Boilers

*2 single ended multitubular*

Working Pressure *200 lbs.*

Tested by hydraulic pressure to

*400 lbs.*

Date of test *26.6.07*

No. of Certificates *67, 68, (69 & 8)*

Can each boiler be worked separately

*Yes*

Area of fire grate in each boiler

*73.25*

No. and Description of Safety Valves to

each boiler

*2 Spring loaded*

Area of each valve

*11 sq in*

Pressure to which they are adjusted

*205 lbs*

Are they fitted with easing gear

*Yes*

Smallest distance between boilers or uptakes and bunkers or woodwork

*9*

Mean dia. of boilers

*16.6*

Length

*11.6*

Material of shell plates

*Steel*

Thickness

*1 1/2*

Range of tensile strength

*28 1/2 to 32 1/2*

Are the shell plates welded or flanged

*no*

Descrip. of riveting: cir. seams

*double*

Long. seams

*double straps*

Diameter of rivet holes in long. seams

*1 1/2*

Pitch of rivets

*9 1/2 x 13 1/2*

Lap of plates or width of butt straps

*22 1/4*

Size of manhole in shell

*20 x 16*

Percentages of strength of longitudinal joint

*90 %*

Working pressure of shell by rules

*208 lbs*

Size of compensating ring

*36 x 32*

No. and Description of Furnaces in each boiler

*4 Deightons*

Length of plain part

*top 19*

Thickness of plates

*bottom 1 1/2*

Description of longitudinal joint

*weld*

No. of strengthening rings

*✓*

Working pressure of furnace by the rules

*213*

Combustion chamber plates: Material

*steel*

Pitch of stays to ditto: Sides

*9 x 8 1/2*

Back

*8 x 7 1/2*

Top

*9 x 8 1/2*

If stays are fitted with nuts or riveted heads

*nuts*

Working pressure by rules

*206, 214, 214*

Material of stays

*iron*

Diameter at smallest part

*1 1/2*

Area supported by each stay

*28 1/2*

Working pressure by rules

*230*

End plates in steam space:

*Steel*

Material

*Steel*

Thickness

*1 1/2*

Pitch of stays

*17 1/2 x 16 1/2*

How are stays secured

*27 x 10*

Working pressure by rules

*215*

Material of Front plates at bottom

*Steel*

Thickness

*1 1/2*

Greatest pitch of stays

*13 1/4*

Working pressure of plate by rules

*272*

Material of tube plates

*Steel*

Diameter of tubes

*2 1/2*

Pitch of tubes

*3 1/2 x 3 1/2*

Working pressures by rules

*358 & 221*

Girders to Chamber tops: Material

*Steel*

Depth and

*10 x 7 1/2*

Thickness of girder at centre

*10 x 7 1/2*

Length as per rule

*31.5</*



# VERTICAL DONKEY BOILER—

Manufacturers of Steel

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

SPARE GEAR. State the articles supplied:— 1 Crank shaft, 1 set coupling bolts, 1 propeller shaft with continuous liner, 4 propeller blades and set of studs and nuts, 2 main bolts & nuts, 2 top end bolts, 2 bottom end bolts, 1 pair top end brasses and bolts, 1 piston rod, 50 Condenser tubes, 3 Valve spindles, 2 eccentric straps, Air pump etc.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building  
 During progress of work in shops— 17/9/06, 28/9, 4/10, 10/10, 22/10, 27/10, 3/11, 8/11, 13/11, 17/11, 20/11, 27/11, 28/11, 4/12, 5/12, 7/12, 12/12, 18/12, 23/12, 29/12, 5/1, 11/1, 18/1, 21/1, 27/1, 3/2, 13/2, 20/2, 27/2, 5/3, 11/3, 18/3, 21/3, 27/3, 3/4, 13/4, 15/4, 24/4, 27/4, 4/5, 11/5, 18/5, 24/5, 29/5, 4/6, 5/6, 10/6, 13/6, 19/6, 22/6, 26/6, 29/6, 4/7, 5/7, 8/7, 9/7, 10/7, 11/7, 19/7, 24/7, 2/8, 2/8, 6/8, 22/8, 29/8, 3/9, 5/9, 14/9/07  
 During erection on board vessel— 23/5, 27/5, 28/5, 29/5, 4/6, 5/6, 10/6, 13/6, 19/6, 22/6, 26/6, 29/6, 4/7, 5/7, 8/7, 9/7, 10/7, 11/7, 19/7, 24/7, 2/8, 2/8, 6/8, 22/8, 29/8, 3/9, 5/9, 14/9/07  
 Total No. of visits— 67—

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 17/9/06 Slides 27/11/06 Covers 9/10/06 Pistons 27/11/06 Rods 7/12/06  
 Connecting rods 27/10/06 Crank shaft 5/12/06 Thrust shaft 5/12/06 Tunnel shafts 5/12/06 Screw shaft 5/12/06 Propeller 4/1/07  
 Stern tube 9/7/07 Steam pipes tested 6 August/07 Engine and boiler seatings 24/8/07 Engines holding down bolts 24/8/07  
 Completion of pumping arrangements 1 August/07 Boilers fixed 19/7/07 Engines tried under steam 15 September  
 Main boiler safety valves adjusted 14 September Thickness of adjusting washers P.B. 5 1/2 S.B. 7 1/2  
 Material of Crank shaft Steel Identification Mark on Do. 5403 Material of Thrust shaft Steel Identification Mark on Do. J.M. 5 per back  
 Material of Tunnel shafts Steel Identification Marks on Do. J.M. 5403 Material of Screw shafts Iron Identification Marks on Do. F.C. 12  
 Material of Steam Pipes Copper Test pressure 400 lbs water pressure 6/8/07

General Remarks (State quality of workmanship, opinions as to class, &c.)  
 The machinery and boilers of this vessel have been constructed in accordance with the rules and approved plans and the workmanship is good.  
 The Glasgow report No. 24820 is enclosed herewith  
 The report on the Electric Lighting Installations will be forwarded in the course of a few days.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 9.07

Elec. Light F.D.  
 ARR  
 23.9.07

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



The amount of Entry Fee. Mr. 72  
 Special Donkey Boiler Fee Mr. 998. 50  
 Travelling Expenses (if any) £ Mr. 50: 50

When applied for.

17 Sept. 1907

When received.

27.9.07

TUES. 24 SEP 1907

Committee's Minute

Assigned

MACHINERY CERTIFICATE  
 WRITTEN.

+ L.M.C. 9.07

F.D. Elec. light

Certificate (if required) to be sent to

This Office