

# REPORT ON BOILERS.

No. 1559

THUR. DEC 20 1906

Port of Trieste

Received at London Office

No. in Survey held at Trieste

Date, first Survey 12<sup>th</sup> June

Last Survey 17/12

1906

Ref. Book.

9 on the

S. S. Vorwaerts

Donkey Boiler

(Number of Visits 15)

Gross 5989

Net 3727

Master R. Colledani

Built at Trieste

By whom built Lloyd Austriaco

When built 1906

Engines made at Trieste

By whom made Lloyd Austriaco

when made 1906-12

Boilers made at Trieste

By whom made Lloyd Austriaco

when made 1906

Registered Horse Power 669

Owners Lloyd Austriaco

Port belonging to Trieste

## MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel Glyde Bridge Steel Co. Ltd.

(Letter for record ) Total Heating Surface of Boilers 1243 <sup>sq</sup> Is forced draft fitted no No. and Description of Boilers

Single ended multitubular Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 17/9/06

No. of Certificate 66 Can each boiler be worked separately — Area of fire grate in each boiler 36.3 <sup>sq</sup> No. and Description of safety valves to each boiler 2 spring loaded Area of each valve 4.9 Pressure to which they are adjusted 180 lbs

Are they fitted with easing gear yes In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler no

Smallest distance between boilers or uptakes and bunkers or woodwork 22" Mean dia. of boilers 11.6" Length 9'-8 1/2"

Material of shell plates steel Thickness 1 1/32" Range of tensile strength 28 1/2 tons Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams double riv. long. seams triple double straps Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 7"

Lap of plates or width of butt straps 1 1/2" Per centages of strength of longitudinal joint rivets 102% plate 83.92% Working pressure of shell by rules 185 lbs

Size of manhole in shell 16" x 12" Size of compensating ring 2" in dia No. and Description of Furnaces in each boiler 2 Deightons Material steel Outside diameter 3'-7 1/4" Length of plain part top 6" bottom 9 1/16"

Description of longitudinal joint welded No. of strengthening rings 2 Working pressure of furnace by the rules 203 Combustion chamber plates: Material steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 9/16" Pitch of stays to ditto: Sides 7" x 7" Back 7 1/2" x 7"

Top 7" x 8 3/8" If stays are fitted with nuts or riveted heads rivets & washers in Working pressure by rules 201 Material of stays iron Diameter at smallest part 1 5/8" Area supported by each stay 54.25" Working pressure by rules 286 End plates in steam space: Material steel Thickness 1"

Pitch of stays 16" x 16" How are stays secured washers rivet Working pressure by rules 200 Material of stays steel Diameter at smallest part 2 3/4"

Area supported by each stay 256 sq" Working pressure by rules 232 Material of Front plates at bottom steel Thickness 1" Material of Lower back plate steel Thickness 7/8" Greatest pitch of stays 7" x 7 1/4" Working pressure of plate by rules 186 Diameter of tubes 3"

Pitch of tubes 4" x 4 1/8" Material of tube plates steel Thickness: Front 29/32" Back 3/4" Mean pitch of stays 8" x 8 1/4" Pitch across wide water spaces 13 1/2" Working pressures by rules 184 lbs Girders to Chamber tops: Material steel Depth and thickness of girder at centre 8" x 1 1/2" Length as per rule 29" Distance apart 8 3/8" Number and pitch of Stays in each 3-7" x 4"

Working pressure by rules 186 Superheater or Steam chest: how connected to boiler — 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 —

## VERTICAL DONKEY BOILER—

No. Description Manufacturers of steel

Made at By whom made When made Where fixed

Working pressure tested by hydraulic pressure to No. of Certificate Fire grate area Description of safety 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

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 Rivets Plates 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

Stayed by Diameter of uptake Thickness of uptake plates Thickness of water tubes

The foregoing is a correct description,

*J. M. Mackay* Manufacturer.

Dates of Survey while building	During progress of work in shops - -	12/6/06	21/6/06	3/7/06	10/7/06	23/7/06	31/7/06	25/8/06	14/9/06
	During erection on board vessel - - -	28/9/06	4/10/06	10/10/06	11/10/06	22/10/06	27/10/06	13/11/06	16/12/06
	Total No. of visits	16							

Is the approved plan of main boiler forwarded herewith

" donkey "

" "

Lloyd's Register Foundation

WA11-0156

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

Workmanship good.

The Survivors are requested not to write on or behind the space for Committee's Minute

The amount of Entry Fee...	£	3	:	-	:
Special ...	£	53	:	9	:
Donkey Boiler Fee ...	£	2	:	2	:
Travelling Expenses (if any) £	:	:	:	:	:

When applied for.

When received.

14/12/1906

22/12/1906

*See Machinery Rpt.*

*Charles Stewart* *Chas R Hughes*  
Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

FRI. 21 DEC 1906

Assigned

*See minute on attached report*



Lloyd's Register Foundation