

REPORT ON BOILERS.

Port of **MIDDLESBROUGH-ON-TEES.**

Received at London Office **1UES. APL 2 1907**

No. in Survey held at
Reg. Book.

Date, first Survey **4th Oct 1906** Last Survey 19

(Number of Visits)

on the **Main boiler for Steam Trawler "Leon"**

Tons } Gross
 } Net

Master Built at **Selby** By whom built **Cochrane & Sons** When built **1907**

Engines made at **Gunnoby** By whom made **Great Central Engine Works No 39** when made **1907.**

Boilers made at **Stockton** By whom made **Tolain & Co Ltd** when made **1907**

Registered Horse Power Owners **Oriental S.S. Co Ltd** Port belonging to **Yus.**

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel **John Spencer & Sons Ltd**

(Letter for record **S**) Total Heating Surface of Boilers **1212 sq ft** Is forced draft fitted **No.** and Description of

Boilers **One Cyl Multitubular** Working Pressure **200 lbs** Tested by hydraulic pressure to **400 lbs** Date of test **17-1-07**

No. of Certificate **3840** Can each boiler be worked separately **✓** Area of fire grate in each boiler **3 1/4 sq ft** No. and Description of

safety valves to each boiler **2 Spring loaded** Area of each valve **3.98 sq in** Pressure to which they are adjusted **20 lbs**

Are they fitted with easing gear **Yes** In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler **✓**

Smallest distance between boilers or uptakes and bunkers or woodwork **8"** Centre dia. of boilers **12-3 3/8** Length **10-2**

Material of shell plates **Steel** Thickness **1 3/16** Range of tensile strength **27/32** Are the shell plates welded or flanged **No**

Descrip. of riveting: cir. seams **L.D. Riv** long. seams **Butt Strap** Diameter of rivet holes in long. seams **1/4** Pitch of rivets **8 3/4**

Lap of plates or width of butt straps **1-6 3/8** Per centages of strength of longitudinal joint **87.8** Working pressure of shell by

rules **202 lbs** Size of manhole in shell **17 x 13** Size of compensating ring **31 x 27 x 1 3/16** No. and Description of Furnaces in each

boiler **Two Plain** Material **Steel** Outside diameter **3-5** Length of plain part **5-4 1/2** Thickness of plates **3/4** **1/64**

Description of longitudinal joint **Welded** No. of strengthening rings **—** Working pressure of furnace by the rules **201 lbs** Combustion chamber

plates: Material **Steel** Thickness: Sides **1/16** Back **1/16** Top **5/8 1/32** Bottom **1 5/32** Pitch of stays to ditto: Sides **8 1/4 x 8** Back **8 3/8 x 8**

Top **9 1/4 x 7 3/4** If stays are fitted with nuts or riveted heads **Nuts** Working pressure by rules **204 lbs** Material of stays **Steel** Diameter at

smallest part **1 9/16** Area supported by each stay **716 sq in** Working pressure by rules **240 lbs** End plates in steam space: Material **Steel** Thickness **1 1/4**

Pitch of stays **20 x 10** How are stays secured **W & W** Working pressure by rules **204 lbs** Material of stays **Steel** Diameter at smallest part **3 1/4**

Area supported by each stay **360 sq in** Working pressure by rules **230 lbs** Material of Front plates at bottom **Steel** Thickness **1 1/32** Material of

Lower back plate **Steel** Thickness **1 1/32** Greatest pitch of stays **17 x 8** Working pressure of plate by rules **208 lbs** Diameter of tubes **3 1/4**

Pitch of tubes **4 1/2 x 4 5/8** Material of tube plates **Steel** Thickness: Front **1 1/32** Back **13 1/16 1/32** Mean pitch of stays **10 3/16** Pitch across wide

water spaces **14** Working pressures by rules **208 lbs** Girders to Chamber tops: Material **Steel** Depth and thickness of

girder at centre **8 7/8 x 2** Length as per rule **33** Distance apart **9 1/4** Number and pitch of Stays in each **Three 7 3/4**

Working pressure by rules **201 lbs** 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 **—** Has 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 Date of test 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 Radius of do. Stayed by Diameter of uptake Thickness of uptake plates

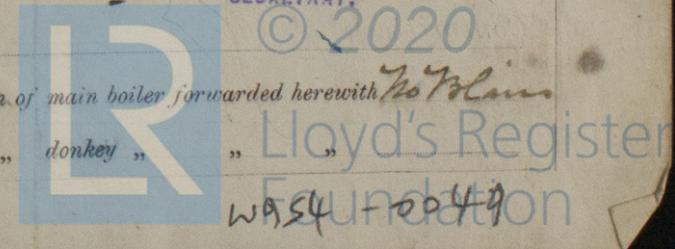
Thickness of water tubes

The foregoing is a correct description,
FOR STEAM & CO., LIMITED.

W. Bourne
SECRETARY

Dates of Survey while building } During progress of work in shops - - } 1906: Oct. 4 Nov 20 Dec 27 1907 Jan. 4. 8. 15. 17
 } During erection on board vessel - - - } 1907: Mar. 4. 15. 16.
 } Total No. of visits } **11**

Is the approved plan of main boiler forwarded herewith **Yes Tolain**
" " " donkey " " **Lloyd's Register**



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

This boiler has been constructed under Special Survey the materials and workmanship are good and efficient and when tested with hydraulic pressure was found tight and satisfactory.
The boiler has been sent to Grimsby to be fitted on board the vessel.

Fitted at Grimsby.

Certificate (if required) to be sent to

(The Signatures are required not to write on or below the space for Committee's Minute.)

The amount of Entry Fee...	£	:	:	When applied for,	
Special	£	:	:	19	
Donkey Boiler Fee ...	£	4	:	When received,	
Travelling Expenses (if any) £	:	:	:	23/26	19

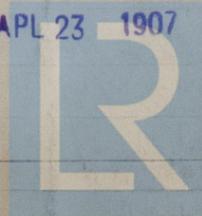
Geo. A. Milner *D. Ritchie*
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

WED. APL 3 1907

TUES. APL 23 1907

Assigned



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Foundation