

REPORT ON BOILERS.

FRI 6 APL 1906

Mdb No. 4452
Ld No. 22700
FRI 6 APL 1906

Port of MIDDLESBROUGH-ON-TEES.

Received at London Office

No. in Survey held at Stockton

Date, first Survey 20th Decr 1905 Last Survey 21st March 1906

Reg. Book.

(Number of Visits 27)

Tons { Gross 2205.78
Net 1401.99

on the Donkey Boiler of S.S. "Trafalgar"
Master Nans Thorsen Built at Amduland By whom built J. Brown & Son When built 1906

Engines made at Stockton By whom made Blair & Co. Ltd when made 1906

Boilers made at Stockton By whom made Blair & Co. Ltd when made 1906

Registered Horse Power _____ Owners Wilk Wilhelmsen Port belonging to Lonsberg

MULTITUBULAR BOILERS FITTED ON MAIN DECK MAIN, AUXILIARY OR DONKEY. — Manufacturers of Steel John Brown & Son Ltd

(Letter for record 7) Total Heating Surface of Boilers 6534 Is forced draft fitted No No. and Description of

Boilers One Cyl Tubular Working Pressure 90 lbs Tested by hydraulic pressure to 180 lbs Date of test 22.1.06

No. of Certificate 3590 Can each boiler be worked separately ✓ Area of fire grate in each boiler 234 No. and Description of

safety valves to each boiler Two Spring Area of each valve 4.9 sq Pressure to which they are adjusted 90 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 8 ft. Dia. of boilers 9'-0" Length 8'-6"

Material of shell plates Steel Thickness 1/2" Range of tensile strength 28/32 Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams 2 D riv long. seams D Bolt Straps Diameter of rivet holes in long. seams 7/8" Pitch of rivets One row 5 1/2"
Two rows 2 3/4"

Lap of plates or width of butt straps 9 1/2" Per centages of strength of longitudinal joint rivets 96.9 Working pressure of shell by
rules 98.4 lbs Size of manhole in shell 16 x 12 Size of compensating ring 30 x 26 x 1/2" No. and Description of Furnaces in each

boiler 2 Plain Material Steel Outside diameter 2'-7" Length of plain part top 5'-8" Thickness of plates crown 1/2"
bottom 1/2 1/32"

Description of longitudinal joint D Bolt Straps No. of strengthening rings — Working pressure of furnace by the rules 111 lbs Combustion chamber

plates: Material Steel Thickness: Sides 1/2" Back 1/2" Top 1/2" Bottom 1/2 1/32" Pitch of stays to ditto: Sides 7 1/2 x 8 1/2" Back 9 1/2 x 8 1/2"

Top 9 x 6 1/2" If stays are fitted with nuts or riveted heads Back & top riveted Working pressure by rules 98.5 lbs Material of stays Iron Diameter at
smallest part 1 5/16" Area supported by each stay 77.1 sq Working pressure by rules 105 lbs End plates in steam space: Material Steel Thickness 3/4"

Pitch of stays 17 x 16" How are stays secured 2 x 10" Working pressure by rules 97 lbs Material of stays Steel Diameter at smallest part 2"

Area supported by each stay 272 sq Working pressure by rules 115 lbs Material of Front plates at bottom Steel Thickness 3/4" Material of

Lower back plate Steel Thickness 3/4" Greatest pitch of stays 19 x 6 1/4" Working pressure of plate by rules 97.2 lbs Diameter of tubes 3"

Pitch of tubes 4 1/4 x 4 1/4" Material of tube plates Steel Thickness: Front 3/4" Back 3/4" Mean pitch of stays 11 1/16" Pitch across wide

water spaces 12 1/2" Working pressures by rules 138 lbs Girders to Chamber tops: Material Steel Depth and thickness of

girder at centre 5 1/2 x 1" Length as per rule 18" Distance apart 9" Number and pitch of Stays in each One 6 1/2"

Working pressure by rules 107 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 — 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 _____ 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,
FOR BLAIR & CO., LIMITED.

W. Bourne Manufacturer. of Donkey Boilers.

Dates of Survey while building { During progress of work in shops - - } 1905 Decr 20-24 1906 Jan 8.12.13.22.25.29 Feb 13.
{ During erection on board vessel - - - } 1906 Feb 28
Total No. of visits _____

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



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 & efficient
 and when tested with hydraulic pressure was found
 tight & satisfactory.
 Fitted on board & tested under steam.

Faint handwritten text on the left margin.

Certificate (if required) to be sent to
 The Surveyors are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee...	£	:	:	When applied for.
Special	£	:	:	8. 3 1906
Donkey Boiler Fee ...	£	2	2 : 0	When received.
Travelling Expenses (if any)	£	:	:	19.

Geo. A. Milner & E. J. Stoddart
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

TUES. 10 APR 1906

Committee's Minute

Assigned

*See Minute
 on attached report*



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