

REPORT ON BOILERS

Pl. No. 13356
No. 5192

MUR. 17 OCT 1907

Date of writing Report 17 Aug 1907 When handed in at Local Office

Received at London Office

Port of MIDDLESBROUGH-ON-TEES.

No. in Survey held at Darlington

Date, First Survey May 27

Last Survey 19

Reg. Book.

22 suppl. on the Donkey Boiler (No 108) for the S/S "MARS"

(Number of Visits)

Gross 3549.78

Net 2236.05

Master A. Henderson

Built at West Hartlepool

By whom built Furness Withy & Co. Ltd

When built 1907

Engines made at Hartlepool

By whom made Richardsons Machinery & Co. Ltd

when made 1907

Boilers made at Darlington

By whom made Blake Boiler Wagon & Eng Co Ltd

when made 1907

Registered Horse Power

Owners Harris & Lisson Ltd

Port belonging to London

MULTITUBULAR BOILERS - MAIN, AUXILIARY OR DONKEY.

Manufacturers of Steel J. Spencer & Son Ltd

(Letter for record (S)) Total Heating Surface of Boilers 660 sq ft

Is forced draft fitted No

No. and Description of Boilers

One Cyl. Mult. single end

Working Pressure 100

Tested by hydraulic pressure to 200

Date of test 16-8-07

No. of Certificate 3997 Can each boiler be worked separately

Area of fire grate in each boiler 27 sq ft

No. and Description of safety valves to each boiler

Two, Spring loaded

Area of each valve 5.939 sq in.

Pressure to which they are adjusted 104 lbs per sq in.

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 Main deck.

Mean dia. of boilers

9'-6" Length 9'-0"

Material of shell plates Steel

Thickness 7/16"

Range of tensile strength 28/32

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams S.R.L.

long. seams DR D B S

Diameter of rivet holes in long. seams 13/16"

Pitch of rivets 4 3/8"

Gap of plates or width of butt straps 9" x 9/16"

Per centages of strength of longitudinal joint rivets 94.4

plate 81.4

Working pressure of shell by rules 110

Size of manhole in shell 12" x 16"

Size of compensating ring 7" x 5/8"

No. and Description of Furnaces in each boiler

2 plain

Material Steel

Outside diameter 3'-0"

Length of plain part top 5'-6"

bottom 7'-7 1/2"

Thickness of plates crown 5"

bottom 5 1/8"

Description of longitudinal joint welded

No. of strengthening rings

Working pressure of furnace by the rules 127

Combustion chamber plates: Material Steel

Thickness: Sides 5/8"

Back 9/16"

Top 5/8"

Bottom 25/32"

Pitch of stays to ditto: Sides 10" x 10 1/2"

Back 9" x 10"

Top 9" x 11" If stays are fitted with nuts or riveted heads nuts

Working pressure by rules 120

Material of stays Steel

Diameter at smallest part 1.5"

Area supported by each stay 90 sq in.

Working pressure by rules 133

End plates in steam space: Material Steel

Thickness 29/32"

Diameter at smallest part 4.3"

Pitch of stays 18" x 19 1/2"

How are stays secured DR & W

Working pressure by rules 105

Material of stays Steel

Thickness 29/32"

Diameter at smallest part 4.3"

Area supported by each stay 315 sq in.

Working pressure by rules 136

Material of Front plates at bottom Steel

Thickness 29/32"

Material of Lower back plate Steel

Thickness 29/32"

Greatest pitch of stays 12 3/4" x 9"

Working pressure of plate by rules 232

Diameter of tubes 3"

Pitch of tubes 4" x 4"

Material of tube plates Steel

Thickness: Front 29/32"

Back 5/8"

Mean pitch of stays 9 5/8"

Pitch across wide water spaces 12 3/4"

Working pressures by rules 150

Girders to Chamber tops: Material Steel

Depth and thickness of girder at centre 6" x 1 3/4"

Length as per rule 2'-4"

Distance apart 11"

Number and pitch of Stays in each 2 9"

Working pressure by rules 152

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

FOR BLAKE BOILER, WAGON & ENGINEERING CO. LIMITED.

The foregoing is a correct description, James Blake Manufacturer.

MANAGING DIRECTOR.

Dates of Survey: During progress of work in shops - May 24 June 20 July 12 14 25 31 Aug 6 7 14 16

while building: During erection on board vessel - - -

Is the approved plan of boiler forwarded herewith Yes

Total No. of visits

GENERAL REMARKS

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

This boiler has been built under Special Survey. The materials and workmanship are good. After satisfactorily withstanding the hydraulic test it has been despatched for fitting on board. This boiler has now been efficiently fitted on board.

Survey Fee ... £ 2 : 2 :
Travelling Expenses (if any) £ :

When applied for, 24/10/07
When received, 7-2-08

R. D. Philston. J. J. Hudson.
Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

FRL 18 OCT 1907

Committee's Minute

Assigned



Lloyd's Register Foundation

W839-0189