

REPORT ON BOILERS.

No. 29949

6 FEB 1920

Received at London Office

Date of writing Report

192

When handed in at Local Office

5 FEB 1920

Port of Sunderland.

No. in
Reg. Book.

Survey held at

Sunderland.

Date, First Survey

Last Survey

4 Feb 1920

(Number of Visits

Gross 4222

Tons

Net 2532

on the

S.S. "ASHLEA"

Master

Built at

Sunderland

By whom built

L. J. Priestman & Co

Hull No.

When built

1919

Engines made at

Sunderland

By whom made

G. & J. Black Ltd

Engine No.

When made

1919

Boilers made at

do

By whom made

do

Boiler No.

When made

1919

Nominal Horse Power

375

Owners

Rufford Shipping Co Ltd.

Port belonging to

Newcastle

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel David Colville & Co Ltd & Wm. Halliwell & Co (Letter for Record 5)

Total Heating Surface of Boilers 6009 sq ft Is forced draught fitted No Coal or Oil fired Coal

No. and Description of Boilers Three 8 ft 6 in 3 ft 6 in S.E. Working Pressure 180 LBS

Tested by hydraulic pressure to 320 LBS Date of test 28/8/20 No. of Certificate 4005 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 58 sq ft No. and Description of safety valves to each boiler Two spring loaded

Area of each set of valves per boiler per Rule 12.8 sq ft as fitted 14.12 sq ft Pressure to which they are adjusted 185 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 6-0 Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 3-0 Is the bottom of the boiler insulated No

Largest internal dia. of boilers 14-3 1/2 Length 11-0 Shell plates: Material Steel Tensile strength 29 to 33 tons

Thickness 1 1/2 Are the shell plates welded or flanged No Description of riveting: circ. seams end 2 1/2 inter. 1 1/2

long. seams TR. J.B.S. Diameter of rivet holes in circ. seams 1 3/16 long. seams 1 3/16 Pitch of rivets 3 7/8 8 1/4

Percentage of strength of circ. end seams plate 65.6 rivets 44.8 Percentage of strength of circ. intermediate seam plate 85.6 rivets 87.6 combined 88.9 Working pressure of shell by Rules 180 LBS

Percentage of strength of longitudinal joint plate 85.6 rivets 87.6 combined 88.9 Working pressure of shell by Rules 180 LBS

Thickness of butt straps outer 7/8 inner 1/2 No. and Description of Furnaces in each Boiler 3 C.F. Feightson

Material Steel Tensile strength 26 to 30 tons Smallest outside diameter 3-5 1/2

Length of plain part top 1/2 bottom 1/2 Thickness of plates crown 1 1/2 bottom 3/2 Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 180 LBS

End plates in steam space: Material Steel Tensile strength 26 to 30 tons Thickness 1 1/2 Pitch of stays 20 x 2 1/4

How are stays secured DN & W Working pressure by Rules 184 LBS

Tube plates: Material front Steel Tensile strength 26 to 30 tons Thickness 1 1/2 3/4 back 1 1/2 3/4

Mean pitch of stay tubes in nests 10 1/4 Pitch across wide water spaces 14 1/4 Working pressure front 183 back 191

Girders to combustion chamber tops: Material Steel Tensile strength 29 to 33 tons Depth and thickness of girder

at centre 6 3/8 x 1 3/4 Length as per Rule 28 7/8 Distance apart 8 No. and pitch of stays

in each 2 @ 8 Working pressure by Rules 181 LBS Combustion chamber plates: Material Steel

Tensile strength 26 to 30 tons Thickness: Sides 3/4 Back 5/8 Top 1/2 Bottom 3/4

Pitch of stays to ditto: Sides 8 1/2 x 8 Back 8 1/2 x 8 1/4 Top 8 x 8 Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules 192 LBS Front plate at bottom: Material Steel Tensile strength 26 to 30 tons

Thickness 1 1/2 Lower back plate: Material Steel Tensile strength 26 to 30 tons Thickness 1 1/2

Pitch of stays at wide water space 14 1/4 x 17 1/4 x 8 Are stays fitted with nuts or riveted over Nuts

Working Pressure 198 LBS Main stays: Material Steel Tensile strength 28 to 32 tons

Diameter At body of stay, 3 1/2 x 2 7/8 No. of threads per inch 6 Area supported by each stay 430 sq in

Working pressure by Rules 198 LBS Screw stays: Material Steel Tensile strength 26 to 30 tons

Diameter At turned off part, 1 5/8 No. of threads per inch 9 Area supported by each stay 70 sq in

Working pressure by Rules 216 LBS Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, 1 1/4" or Over threads 1 1/4" }
No. of threads per inch 9 Area supported by each stay 960" Working pressure by Rules 228 LBS
Tubes: Material Steel External diameter { Plain 3 1/4" Stay 3 1/4" } Thickness { 8 W.C. 5/16" 3/8" } No. of threads per inch 9
Pitch of tubes 4 1/2" x 4 3/8" Working pressure by Rules 210 LBS Manhole compensation: Size of opening
Shell plate 12' 16" Section of compensating ring FLANGED No. of rivets and diameter of rivet holes
Outer row rivet pitch at ends - Depth of flange if manhole flanged 3 1/8" Steam Dome: Material -
Tensile strength - Thickness of shell - Description of longitudinal joint -
Diameter of rivet holes - Pitch of rivets - Percentage of strength of joint { Plate - Rivets - }
Internal diameter - Working pressure by Rules - Thickness of crown - No. and diameter
stays - Inner radius of crown - Working pressure by Rules -
How connected to shell - Size of doubling plate under dome - Diameter of rivet holes and pitch
of rivets in outer row in dome connection to shell -

Type of Superheater NONE Manufacturers of { Tubes - Steel castings - }
Number of elements - Material of tubes - Internal diameter and thickness of tubes -
Material of headers - Tensile strength - Thickness - Can the superheater be shut off at
the boiler be worked separately - Is a safety valve fitted to every part of the superheater which can be shut off from the boiler
Area of each safety valve - Are the safety valves fitted with easing gear - Working pressure as per
Rules - Pressure to which the safety valves are adjusted - Hydraulic test pressure
tubes - castings - and after assembly in place - Are drain cocks or valves fitted
to free the superheater from water where necessary -

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with yes

The foregoing is a correct description,
FOR GEORGE CLARK LIMITED. W. B. G. MULL Manufacture

Dates of Survey { During progress of work in shops - - } Please see Machinery Rpt. Are the approved plans of boiler and superheater forwarded herewith
while building { During erection on board vessel - - } (If not state date of approval.)
Total No. of visits -

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been built under special survey & the materials & workmanship are good. On completion they were satisfactorily fitted on board the vessel & the safety valves adjusted under steam. For notation see machinery report.

Survey Fee ... Charged on Machinery Report When applied for, 192
Travelling Expenses (if any) £ - When received, 192

W. B. G. MULL
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 12 FEB 1929

Assigned

See M.C. rpt. attached



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Foundation