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Rpt. 5a.

Mob. Rpt. No. 18696

# REPORT ON BOILERS.

No. 105675

Received at London Office.

Date of writing Report. 19... When handed in at Local Office. 10 NOV 1948 Port of NEWCASTLE-ON-TYNE

No. in Survey held at Wallsend Date, First Survey 17<sup>th</sup> DEC 1947 Last Survey 5<sup>th</sup> OCTOBER 1948

on the M.V. BRITISH YEOMAN (Number of Visits. 50) Gross 8741 Tons Net 5038

Master Built at Haverton Hill on Tees By whom built Furness S.B. Co. Ltd. Yard No. 412. When built

Engines made at Wallsend By whom made N.E. Mar Eng Co. (1938) Ltd. Engine No. 3160 When made 1948

Boilers made at Wallsend By whom made ditto Boiler No. 3160 When made 1948

Nominal Horse Power  $\frac{4004}{12} = 334$  H.P. Owners British Tanker Co. Ltd. Port belonging to

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colvilles Ltd, Glasgow (Letter for Record S.)

Total Heating Surface of Boilers  $2002 \times 2 = 4004$  sq ft. Is forced draught fitted Yes Coal or Oil fired Oil fired

No. and Description of Boilers 2 Single Ended Working Pressure 150 LBS.

Tested by hydraulic pressure to 275 lb. Date of test 7-6-48 No. of Certificate 1295.

Area of Firegrate in each Boiler 2 of 22" Cockburn Impr. High Lift.

Area of each set of valves per boiler 7.66 sq ins. No. and Description of safety valves to each boiler 2 of 22" Cockburn Impr. High Lift.

Pressure to which they are adjusted 9.80 " " Are they fitted with easing gear

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No main R.R.

Smallest distance between boilers or uptakes and bunkers or woodwork Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated

Largest internal dia. of boilers  $12' - 10\frac{3}{16}"$  Length  $11' - 6"$  Shell plates: Material M.Stl Tensile strength 29 to 33 tons

Thickness  $29/32"$  Are the shell plates welded or flanged No Description of riveting: circ. seams end ditto riv. inter. N.I.L.

g. seams T.Rw. 84 lb butt straps Diameter of rivet holes in circ. seams  $1\frac{1}{8}"$  Pitch of rivets  $3\frac{1}{4}"$

Percentage of strength of circ. end seams plate 65.5 rivets 53.4 Percentage of strength of circ. intermediate seam plate 84.8 rivets 103.8

Percentage of strength of longitudinal joint rivets 90.5 Working pressure of shell by Rules 156.7 lb

Thickness of butt straps outer  $3/4"$  inner  $7/8"$  No. and Description of Furnaces in each Boiler 2 C.f. (Deighton type)

Material M.Stl Tensile strength 26 to 30 tons Smallest outside diameter  $3' - 8\frac{3}{16}"$

Thickness of plates crown  $15/32"$  bottom  $1/16"$  Description of longitudinal joint weld.

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 150.3 lb

plates in steam space: Material Stl Tensile strength 26 to 30 tons Thickness  $1\frac{3}{8}"$  Pitch of stays  $30" \times 16"$

are stays secured Nutted inside & outside Working pressure by Rules 153.6 lb

plates: Material front Stl back Stl Tensile strength 26 to 30 tons Thickness front  $27/32"$  back  $3/4"$

pitch of stay tubes in nests  $9\frac{3}{8}"$  Pitch across wide water spaces  $14\frac{1}{2}"$  Working pressure front 182 lb back 227 lb

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

atre  $9" \times 3\frac{1}{4}"$  dth Length as per Rule  $2' - 10"$  Distance apart  $10\frac{3}{4}"$  No. and pitch of stays

ch 2 at  $10\frac{3}{4}"$  Working pressure by Rules 175.8 lb Combustion chamber plates: Material Stl

le strength 26 to 30 tons Thickness: Sides  $3/4"$  Back  $3/4"$  Top  $3/4"$  Bottom  $3/4"$

of stays to ditto: Sides  $10\frac{3}{4}" \times 7\frac{1}{2}"$  Back  $10\frac{3}{4}" \times 7\frac{1}{2}"$  Top  $10\frac{3}{4}" \times 10\frac{3}{4}"$  Are stays fitted with nuts or riveted over marginal & top plate

ing pressure by Rules 154 lb MIN. Front plate at bottom: Material Stl Tensile strength 26 to 30 tons REMAINDER ARE RIVETED OVER.

ness  $27/32"$  Lower back plate: Material Stl Tensile strength 26 to 30 tons Thickness  $13/16"$  marginal are NUTTED.

of stays at wide water space  $14\frac{1}{2}"$  Are stays fitted with nuts or riveted over REMAINDER ARE RIVETED OVER.

ing pressure 201 lb. Main stays: Material M.Stl Tensile strength 28 to 32 tons

ter At body of stay  $3"$  No. of threads per inch 6. Area supported by each stay 480 sq ins

Over threads  $3\frac{1}{4}"$  Screw stays: Material M.Stl Tensile strength 26 to 30 tons

ing pressure by Rules 163.5 lb No. of threads per inch 9. Area supported by each stay 80.6 sq ins

ter At turned off part  $1\frac{1}{2}"$  CONTR OVER.

CONTR OVER.

Lloyd's Register  
Foundation

002916-002922 0153



Working pressure by Rules. 155.7 lb Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, 1 5/8" or 1 3/4" Over threads. 158, 134  
No. of threads per inch 9 Area supported by each stay 94.7 sq in Working pressure by Rules 160.2 lb  
Tubes: Material S.D. Steel External diameter { Plain 2 1/2" Thickness 10 W.G. No. of threads per inch 9  
Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules 217 lb Manhole compensation: Size of opening  
shell plate ✓ Section of compensating ring ✓ No. of rivets and diameter of rivet holes ✓  
Outer row rivet pitch at ends ✓ Depth of flange if manhole flanged ✓ Steam Dome: NIL  
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 ✓ Diameter of rivet holes and  
How connected to shell ✓ Size of doubling plate under dome ✓  
of rivets in outer row in dome connection to shell ✓

Type of Superheater NIL Manufacturers of { Tubes ✓ Steel forgings ✓ 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  
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 ✓  
Rules ✓ Pressure to which the safety valves are adjusted ✓ Hydraulic test pressure ✓  
tubes ✓ forgings and castings ✓ and after assembly in place ✓ Are drain  
valves fitted to free the superheater from water where necessary ✓  
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes

THE NORTH EASTERN MARINE ENGINEERING CO. (1938) LTD.  
The foregoing is a correct description,  
gusshut  
DIRECTOR  
Are the approved plans of boiler and superheater forwarded herewith Yes  
(If not state date of approval.) appr 4-6-48  
Total No. of visits 50

Dates of Survey { During progress of work in shops - - - }  
while building { During erection on board vessel - - - }

PLEASE SEE REPORT LB

Is this Boiler a duplicate of a previous case Yes

If so, state Vessel's name and Report No. Blos R.W. 2764 for Furness S.B. Ym 1038 NWC Rpt 1038

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

These Donkey Boilers have been constructed under special  
in accordance with the approved plan and the Society's Rules.  
and the materials and workmanship are good.  
The Boilers have been sent to W. Hpl to be fitted on board

Survey Fee ... £ 58-8/-  
Travelling Expenses (if any) £ ...

When applied for, 10 NOV 1948  
When received, 19

A. Watt

Engineer Surveyor to Lloyd's Register

Committee's Minute

Assigned

See F.E. mchly rpt

FRI. 8 APR 1949

Has the Steel been tested as required by the Rules