

DEC 27 1940

Received at London Office

17.2

6.18.2

Date of writing Report 19 When handed in at Local Office 16/12/40 Port of **NEWCASTLE-ON-TYNE**

No. in Survey held at **Newcastle** Date, First Survey **23 Jan 1940** Last Survey **6 Dec 1940**
on the **4s LAPSEKI.** (Number of Visits) Gross **691**
Tons Net **265**

Built at **Newcastle** By whom built **Swan, Hunter & Wigham Richardson Ltd** Yard No. **1670** When built **1940-**
Engines made at **do** By whom made **do** Engine No. **1670** When made **"**
Boilers made at **do** By whom made **do** Boiler No. **1670** When made **"**
Nominal Horse Power Owners Port belonging to

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY, OR DONKEY.~~

Manufacturers of Steel **The Steel Coy. of Scotland, & Colvilles Ltd** (Letter for Record **S** ✓)
Total Heating Surface of Boilers **2554 sq ft** Is forced draught fitted **Yes** ✓ Coal or Oil fired **Coal.** ✓
No. and Description of Boilers **Two Single ended "Scotch"** Working Pressure **180 lbs** ✓
Tested by hydraulic pressure to **320 lbs** Date of test **25/2/40** No. of Certificate **868 & 869** Can each boiler be worked separately **Yes** ✓
Area of Firegrate in each Boiler **34.5 sq ft** No. and Description of safety valves to each boiler **Two 2" Cockburn's Imp. High Lift.** ✓
Area of each set of valves per boiler { per Rule **4.09 sq ins** ✓ as fitted **6.28 "** Pressure to which they are adjusted **180 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 **3'-0"** Is oil fuel carried in the double bottom under boilers **No** ✓
Smallest distance between shell of boiler and tank top plating **No tank under Boilers** Is the bottom of the boiler insulated **No** ✓
Largest internal dia. of boilers **11'-1 1/4"** Length **11'-0"** Shell plates: Material **Steel** ✓ Tensile strength **30 to 34 tons** ✓
Thickness **7/8"** Are the shell plates welded or flanged **No** ✓ Description of riveting: circ. seams { end **D.R. overlap** ✓ inter. **none** ✓
Long. seams **TR. Dble butt straps** Diameter of rivet holes in { circ. seams **1"** ✓ long. seams **15/16"** ✓ Pitch of rivets { **3.24** ✓ **6 7/8"** (Rule max 6 7/8") ✓
Percentage of strength of circ. end seams { plate **69.13** ✓ rivets **42.47** ✓ Percentage of strength of circ. intermediate seam { plate **None** ✓ rivets **None** ✓
Percentage of strength of longitudinal joint { plate **85.84** ✓ rivets **85.55** ✓ combined **88.8.** ✓
Thickness of butt straps { outer **21/32"** ✓ inner **25/32"** ✓ No. and Description of Furnaces in each Boiler **Two "Deighton" Corrugated** ✓
Material **Steel** Tensile strength **26 to 30 tons** Smallest outside diameter **3'-0 15/16"** ✓
Length of plain part { top **5 1/4"** ✓ Thickness of plates { crown **19/32"** ✓ bottom **cc butt 1/16"** ✓ Description of longitudinal joint **Fire welded.** ✓
Dimensions of stiffening rings on furnace or c.c. bottom **None** ✓
End plates in steam space: Material **Steel** Tensile strength **26 to 30 tons** Thickness **29/32"** Pitch of stays **13 3/4" x 14 7/8" max** ✓
How are stays secured **Nuts inside & outside** ✓
Tube plates: Material { front **Steel** ✓ back **Steel** Tensile strength **26 to 30 tons** Thickness { **29/32"** ✓ **3/4"** ✓
Mean pitch of stay tubes in nests **9 3/8"** Pitch across wide water spaces **13 1/2"** ✓
Girders to combustion chamber tops: Material **Steel** Tensile strength **28-32 tons** Depth and thickness of girder
at centre **8 3/8" x 5 7/8" x two** Length as per Rule **30 9/16"** Distance apart **9"** No. and pitch of stays
in each **Two @ 9 3/4"** Combustion chamber plates: Material **Steel** ✓
Tensile strength **26 to 30 tons** Thickness: Sides **1/16"** Back **1/16"** Top **1/16"** Bottom **1/16"** ✓
Pitch of stays to ditto: Sides **9 1/2" x 9 1/2"** Back **9" x 9 3/4"** Top **9" x 9 3/4"** Are stays fitted with nuts or riveted over **with nuts** ✓
Front plate at bottom: Material **Steel** Tensile strength **26 to 30 tons** ✓
Thickness **29/32"** Lower back plate: Material **Steel** Tensile strength **26 to 30 tons** Thickness **29/32"** ✓
Pitch of stays at wide water space **13 1/2" x 9 3/4"** (max at lower end) **14 1/4" x 9 3/4"** Are stays fitted with nuts or riveted over **with nuts** ✓
Main stays: Material **Steel** Tensile strength **28 to 32 tons** ✓
Diameter { At body of stay } **2 3/8"** ✓ No. of threads per inch **6.** ✓
Screw stays: Material **Steel** Tensile strength **26 to 30 tons** ✓
Diameter { At turned off part } **1 3/4"** ✓ No. of threads per inch **9.** ✓

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Are the stays drilled at the outer ends *No* ✓ Margin stays: Diameter *1 3/4" + 1 7/8"* ✓
No. of threads per inch *9* ✓
Tubes: Material *Steel* ✓ External diameter { Plain } *2 1/2"* ✓ Thickness { *9 W.G.* } *5/16"* ✓ No. of threads per inch *9* ✓
Pitch of tubes *3 3/4" x 3 3/4"* ✓ Manhole compensation: Size of opening
shell plate *16" x 20"* ✓ Section of compensating ring *19 1/8" x 7/8" flanged* ✓ No. of rivets and diameter of rivet holes *32 @ 1 5/16" dia* ✓
Outer row rivet pitch at ends *9 1/8"* ✓ Depth of flange if manhole flanged *2 1/2"* ✓
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 _____ Thickness of crown _____ No. and diameter _____
stays _____ Inner radius of crown _____
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 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 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 _____
Pressure to which the safety valves are adjusted _____ Hydraulic test pressure _____
tubes _____ forgings and castings _____ and after assembly in place _____ Are drain cocks _____
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 foregoing is a correct description,
SWAN, HUNTER, & WIGHAM RICHARDSON, LTD.
Manufactured by *G. J. Stuedgen* no. *15/12/1941*
DIRECTOR

Dates of Survey { During progress of work in shops - - } *See Machy Report* ✓ Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
while building { During erection on board vessel - - }
Total No. of visits _____

Is this Boiler a duplicate of a previous case *Yes* ✓ If so, state Vessel's name and Report No. *Leabat Yard No 1662*
have Rpt No 98746.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
The Boilers of this Vessel have been built under Special Survey in accordance with the Society's Rules and approved plans, The Boilers have been satisfactorily fitted on board & tested under steam under working conditions. The materials and workmanship are good.
See also Machy. Rpt 4.

Survey Fee ... £ *See Rpt 4* ✓ When applied for, 19
Travelling Expenses (if any) £ : : When received, 19

A. A. Latt
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 3 JAN 1941*
Assigned *See NWC. J.E. 99054*