

# REPORT ON BOILERS.

Received at London Office

Date of writing Report *0.9* 19 *42* When handed in at Local Office *23/3/42* Port of **NEWCASTLE-ON-TYNE**

No. in Reg. Book. *Newcastle on Tyne* Date, First Survey *27 Jan 1941* Last Survey *19 March 1942*

on the *5 1/2 "BALTYK."* (Number of Visits *6*) Gross Tons *7001* Net Tons *5121*

Master \_\_\_\_\_ Built at *Newcastle* By whom built *Swan, Hunter & Wigham Richardson Ltd* Yard No. *1704* When built *1942-*

Engines made at *Newcastle* By whom made *ditto.* Engine No. *1704* When made *1942-*

Boilers made at *ditto.* By whom made *ditto.* Boiler No. *1704* When made *1942-*

Nominal Horse Power \_\_\_\_\_ Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_

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

Manufacturers of Steel *The Steel Company of Scotland, & Colvilles Ltd.* (Letter for Record *5.*)

Total Heating Surface of Boilers *6080 sq ft* Is forced draught fitted *Yes* Coal or Oil fired *Coal*

No. and Description of Boilers *Two S.E. Blns.* Working Pressure *220 lbs.*

Tested by hydraulic pressure to *380 lb* Date of test *16/1/42* No. of Certificate *938.* Can each boiler be worked separately *Yes*

Area of Firegrate in each Boiler *77 sq ft* No. and Description of safety valves to each boiler *Two of 2 1/2 dia. Cockburn's imp High Lift.*

Area of each set of valves per boiler {per Rule *8.65* as fitted *9.8*} Pressure to which they are adjusted *220 lb* Are they fitted with easing gear *Yes*

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

Smallest distance between boilers or uptakes and bunkers or woodwork *17"* Is oil fuel carried in the double bottom under boilers *No*

Smallest distance between shell of boiler and tank top plating *23 1/4"* Is the bottom of the boiler insulated *Yes*

Largest internal dia. of boilers *16'-3"* Length *12'-0"* Shell plates: Material *S.* Tensile strength *30 to 34 tons*

Thickness *1 33/64* Are the shell plates welded or flanged *No* Description of riveting: circ. seams {end *D.R. lap.* inter. *4.60.* } Pitch of rivets { *10.50.* }

long. seams *T.R. dbl. butt straps* Diameter of rivet holes in {circ. seams } *1 9/16"* {long. seams }

Percentage of strength of circ. end seams {plate *66.03* rivets *42.17.* } Percentage of strength of circ. intermediate seam {plate *85.11.* rivets *86.0.* combined *87.55.* }

Percentage of strength of longitudinal joint {plate *85.11.* rivets *86.0.* combined *87.55.* } Working pressure of shell by Rules *221 lbs.*

Thickness of butt straps {outer *15/32"* inner *19/32"* } No. and Description of Furnaces in each Boiler *Four Dighton Corrugated.*

Material *S.* Tensile strength *26 to 30 tons* Smallest outside diameter *41."*

Length of plain part {top *✓* bottom *✓* } Thickness of plates {crown *5/8"* bottom *5/8"* } Description of longitudinal joint *fire welded.*

Dimensions of stiffening rings on furnace or c.c. bottom *none* Working pressure of furnace by Rules *222 lbs.*

End plates in steam space: Material *S.* Tensile strength *26 to 30 tons* Thickness *1 7/32"* Pitch of stays *20 1/2 x 14"*

How are stays secured *Nuts inside & outside* Working pressure by Rules *225 lbs.*

Tube plates: Material {front *S.* back *S.* } Tensile strength { *26 to 30 tons* } Thickness { *1 1/32"* *27/32"* }

Mean pitch of stay tubes in nests *10 5/8"* Pitch across wide water spaces *14"* Working pressure {front *274 lbs.* back *227 lbs.* }

Girders to combustion chamber tops: Material *S.* Tensile strength *28 to 32 tons* Depth and thickness of girder at centre *10 1/2 x 25/32 x two* Length as per Rule *34 7/16"* Distance apart *10"* No. and pitch of stays in each *Three @ 8"* Working pressure by Rules *224 lbs.* Combustion chamber plates: Material *S.*

Tensile strength *26 to 30 tons* Thickness: Sides *3/4"* Back *23/32"* Top *3/4"* Bottom *3/4"*

Pitch of stays to ditto: Sides *8 x 10"* Back *8 1/2 x 9"* Top *8 x 10"* Are stays fitted with nuts or riveted over *with nuts.*

Working pressure by Rules *221 lbs. min.* Front plate at bottom: Material *S.* Tensile strength *26 to 30 tons*

Thickness *1 1/32"* Lower back plate: Material *S.* Tensile strength *26 to 30 tons* Thickness *15/16"*

Pitch of stays at wide water space *14" x 9 1/4"* Are stays fitted with nuts or riveted over *with nuts*

Working Pressure *256 lbs.* Main stays: Material *S.* Tensile strength *28 to 32 tons*

Diameter {At body of stay, or Over threads *2 7/8"* } No. of threads per inch *6.* Area supported by each stay *275.1 sq ins*

Working pressure by Rules *221 lbs.* Screw stays: Material *S.* Tensile strength *26 to 30 tons*

Diameter {At turned off part, or Over threads *1 3/4"* } No. of threads per inch *9.* Area supported by each stay *78 sq ins*

Working pressure by Rules **232<sup>lb</sup>** Are the stays drilled at the outer ends **No** Margin stays: Diameter **1 3/4" + 2"**  
 No. of threads per inch **9** Area supported by each stay **101.2** Working pressure by Rules **230<sup>lb</sup>**  
 Tubes: Material **S** External diameter **3"** Thickness **8 W.G.** No. of threads per inch **9**  
 Pitch of tubes **4 1/4" x 4 1/4"** Working pressure by Rules **225<sup>lb</sup>** Manhole compensation: Size of opening in  
 shell plate **20" x 16"** Section of compensating ring **(13 5/8" x 1 3/8") x 3/16"** No. of rivets and diameter of rivet holes **38 of 1 3/16" dia.**  
 Outer row rivet pitch at ends **10 1/2"** Depth of flange if manhole/flanged **3"** Steam Dome: Material **None**  
 Tensile strength Thickness of shell Description of longitudinal joint  
 Diameter of rivet holes Pitch of rivets Percentage of strength of joint  
 Internal diameter Working pressure by Rules Thickness of crown No. and diameter of  
 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 **Steel forgings**  
 Number of elements Material of tubes Internal diameter and thickness of tubes  
 Material of headers Tensile strength Thickness Can the superheater be shut off and  
 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 casing gear Working pressure as per  
 Rules Pressure to which the safety valves are adjusted Hydraulic test pressure:  
 tubes forgings and 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 22 inclusive for boilers been complied with **Yes**

FOR The foregoing is a correct description,  
 SWAN, HUNTER, & WIGHAM RICHARDSON, LTD. Manufacturer.

*G. J. Sweeney*

Dates of Survey { During progress of work in shops - - } **See Machy Report** Are the approved plans of boiler and superheater forwarded herewith **Yes**  
 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. **Empire Foam No. Rpt. 99549. Yard No 1694**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)  
 These Boilers have been constructed under special survey in accordance with the approved plans and the Society's Rules, and the materials and workmanship are good.  
 The Boilers have been efficiently installed on board the vessel and tested under steam under working conditions with satisfactory results.

See also Machy Rpt 4.

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

*A. Watt*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **TUE. 21 APR 1942**

Assigned **See Nwc. J.C. 100,318**

