

# REPORT ON BOILERS.

No. 74869

Date of writing Report 13 Oct 1921 When handed in at Local Office 19 Port of NEWCASTLE ON TYNE WED 19 OCT. 1921

No. in Survey held at Walker on Tyne Date, First Survey See Machinery Report.  
 Reg. Book. 1120 (Number of Visits) 19  
 on the Twin Screw Cable Steamer ALL AMERICA Tons } Gross  
 Master Richardson & Co Net  
 Built at Walker on Tyne By whom built Swan Hunter & Higham When built 1921-10  
 Engines made at Walker on Tyne By whom made Swan Hunter & Higham Richardson & Co When made 1921-10  
 Boilers made at Walker on Tyne By whom made Swan Hunter & Higham Richardson & Co When made 1921-10  
 Registered Horse Power \_\_\_\_\_ Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_

## MULTITUBULAR BOILERS - MAIN, AUXILIARY OR DONKEY. - Manufacturers of Steel J Spence & Sons

(Letter for record S) Total Heating Surface of Boilers 620 sq ft Is forced draft fitted No No. and Description of Boilers one SE CYL MULTITUBULAR Working Pressure 100 lb Tested by hydraulic pressure to 200 lb Date of test 27.4.21

No. of Certificate 9556 Can each boiler be worked separately Yes Area of fire grate in each boiler oil fuel No. and Description of safety valves to each boiler two direct spring Area of each valve 4.90 Pressure to which they are adjusted 100 lb WP

Are they fitted with easing gear yes In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler non R. Valve

Smallest distance between boilers or uptakes and bunkers or woodwork 16" Mean dia. of boilers 9'-0" Length 9'-0"

Material of shell plates Steel Thickness 17/32 Range of tensile strength 30/34 Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams S RLAP long. seams TRLAP Diameter of rivet holes in long. seams 13/16 Pitch of rivets 3 3/4

Lap of plates or width of butt straps 5 13/16 Per centages of strength of longitudinal joint rivets 88.6% Working pressure of shell by rules 104 lb Size of manhole in shell 16x12 Size of compensating ring flanged 2'-9x12 plate 78.33%

boiler two-plain Material Steel Outside diameter 2'-9" Length of plain part top 5'-9" Thickness of plates 1/2" bottom 6-1/8"

Description of longitudinal joint WELD No. of strengthening rings \_\_\_\_\_ Working pressure of furnace by the rules 107 lb Combustion chamber plates: Material Steel Thickness: Sides 17/32 Back 17/32 Top 17/32 Bottom 11/16 Pitch of stays to ditto: Sides 8 1/4 x 9 1/4 Back 9 x 8 1/2

Top 9 1/2 x 9 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 101 lb Material of stays Steel Area at smallest part 1.190 Area supported by each stay 85.5 sq in Working pressure by rules 101 lb End plates in steam space: Material Steel Thickness 3/4"

Pitch of stays 16 1/2 x 15 How are stays secured DN-W Working pressure by rules 101 lb Material of stays Steel Area at smallest part 2.87 sq in

Area supported by each stay 247.5 sq in Working pressure by rules 100 lb Material of Front plates at bottom Steel Thickness 3/4" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 14" Working pressure of plate by rules 140 lb Diameter of tubes 3"

Pitch of tubes 4 1/4 x 4 1/8 Material of tube plates Steel Thickness: Front 3/4" Back 5/8" Mean pitch of stays 10 1/2" Pitch across wide water spaces 14" Working pressures by rules 102 lb Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 7 1/8 x 1" Length as per rule 22.09 Distance apart 9 1/2" Number and pitch of Stays in each one - 9 pitch

Working pressure by rules 131 lb Steam dome: description of joint to shell none % of strength of joint \_\_\_\_\_

Diameter \_\_\_\_\_ Thickness of shell plates \_\_\_\_\_ Material \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ Diam. of rivet holes \_\_\_\_\_

Pitch of rivets \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Crown plates \_\_\_\_\_ Thickness \_\_\_\_\_ How stayed \_\_\_\_\_

UPERHEATER. Type none Date of Approval of Plan \_\_\_\_\_ Tested by Hydraulic Pressure to \_\_\_\_\_

Date of Test \_\_\_\_\_ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler \_\_\_\_\_

Diameter of Safety Valve \_\_\_\_\_ Pressure to which each is adjusted \_\_\_\_\_ Is Easing Gear fitted \_\_\_\_\_

FOR SWAN, HUNTER & HIGHAM, LTD. The foregoing is a correct description, G F Stewart Manufacturer.

Dates of Survey } During progress of work in shops - - } See Machinery Report. Is the approved plan of boiler forwarded herewith yes  
while building } During erection on board vessel - - - }  
Total No. of visits \_\_\_\_\_

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

The Boilers built under Special Survey the material and workmanship found good and efficient. The Boilers tested under 200 lbs by draulic pressure at the makers under and found satisfactory. Subsequently fitted up on board the Vessel (in Boiler Room), tested under Steam, found satisfactory. Its Safety Valves adjusted for a working pressure of 100 lb.

Survey Fee ... £ See Engine Report When applied for, 19  
Travelling Expenses (if any) £ \_\_\_\_\_ When received, 19

Committee's Minute FRI. OCT. 28 1921 L. G. Shalleross. Engineer Surveyor to Lloyd's Register of Shipping.