Apt. 5a.

REPORT ON BOILERS.

No. 67443.

Received at London Office THU. APR 29. 1915

Date of writing Report ____ 191 ____ When handed in at Local Office APR 28 1915 191 ____ Port of NEWCASTLE-ON-TYNE.

No. in Reg. Book. ____ Survey held at Newcastle ____ Date, First Survey Dec 1 1914 Last Survey Apr 9 1915 (Number of Visits 9) Tons Gross / Net

on the Messrs Swan Hunter & Wigham Richardsons Contract No 960 D
The Sociedad Espanola de Construccion Naval No 44

Master ____ Built at ____ By whom built ____ When built ____

Engines made at ____ By whom made ____ When made ____

Boilers ~~PLATES FLANGED~~ made at Walker ____ By whom ~~made~~ FLANGED Messrs Swan Hunter & Wigham Richardson Ltd When made ____

Registered Horse Power ____ Owners ____ Port belonging to ____

MULTITUBULAR BOILERS—~~MAIN, AUXILIARY OR~~ DONKEY.—Manufacturers of Steel John Spencer & Co

Letter for record ____ **Total Heating Surface of Boilers** 693 ft ____ Is forced draft fitted ____ **No. and Description of Boilers** one S E Cyl: Mult: ____ **Working Pressure** 180 ____ Tested by hydraulic pressure to ____ Date of test ____

No. of Certificate ____ Can each boiler be worked separately ____ **Area of fire grate in each boiler** 24 ft ____ No. and Description of safety valves to each boiler ____ Area of each valve ____ Pressure to which they are adjusted ____

Are they fitted with easing gear ____ 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 ____ ~~Mean~~ INSIDE dia. of boilers 9'-10 5/16" Length 7'-6"

Material of shell plates steel Thickness 27/32" Range of tensile strength 29 3/4 to 33 tons Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams DR lap long. seams TRDB Strap Diameter of rivet holes in long. seams 15/16" Pitch of rivets 6 11/16"

Lap of plates or width of butt straps 14 1/2 Per centages of strength of longitudinal joint rivets ____ plate ____ Working pressure of shell by rules ____ Size of manhole in shell 16" x 12" Size of compensating ring 9" x 27/32" flanged **No. and Description of Furnaces in each boiler** two Fox's Material steel Outside diameter 34 3/4" Length of plain part top ____ bottom ____ Thickness of plates crown 7/16" bottom ____

Description of longitudinal joint weld No. of strengthening rings ____ Working pressure of furnace by the rules ____ Combustion chamber plates: Material steel Thickness: Sides 21/32" Back 11/16" Top 21/32" Bottom 3/4" Pitch of stays to ditto: Sides 9" x 8 1/2" Back 9 1/2 x 9" Top 8 1/2 x 8 1/2 If stays are fitted with nuts or riveted heads nuts Working pressure by rules ____ Material of stays steel ~~Diameter~~ AREA at smallest part Top 1.730" BCS 2.03 D" Area supported by each stay Top 72 1/4" B 85.50" Working pressure by rules ____ End plates in steam space: Material steel Thickness 1 1/16" Pitch of stays 7 1/2" x 15" How are stays secured d n & w Working pressure by rules ____ Material of stays steel ~~Diameter~~ AREA at smallest part 6.1" Area supported by each stay 283.5" Working pressure by rules ____ Material of Front plates at bottom steel Thickness 1 1/16" Material of Lower back plate steel Thickness 1 1/16" Greatest pitch of stays 14" x 9" Working pressure of plate by rules ____ Diameter of tubes 3" Pitch of tubes 14 1/4" x 14 1/8" Material of tube plates steel Thickness: Front 1 1/16" Back 3/4" Mean pitch of stays 12 3/4" x 13 1/4" Pitch across wide water spaces 14" Working pressures by rules ____ Girders to Chamber tops: Material steel Depth and thickness of girder at centre 7 1/2" x 1 1/4" Length as per rule 22 1/2" Distance apart 8 1/2" Number and pitch of Stays in each one 8 1/2"

Working pressure by rules ____ Superheater or Steam chest; how connected to boiler ✓ Can the superheater be shut off and the boiler worked separately ✓ Diameter ✓ Length ✓ Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ Diam. of rivet holes ✓ Pitch of rivets ✓ Working pressure of shell by rules ✓ Diameter of flue ✓ Material of flue plates ✓ Thickness ✓ If stiffened with rings ✓ Distance between rings ✓ Working pressure by rules ✓ End plates: Thickness ✓ How stayed ✓ Working pressure of end plates ✓ Area of safety valves to superheater ✓ Are they fitted with easing gear ✓

29.4"

The foregoing is a correct description,

FOR SWAN, HUNTER & WIGHAM RICHARDSON, LTD.

L. T. Sweet DIRECTOR

Manufacturer.

Dates of Survey while building — During progress of work in shops: 1914 Dec 1. 4. 8. 10. 1915 Jan 15. 28. Feb. 4. 26. Apr 9

During erection on board vessel: ____

Is the approved plan of boiler forwarded herewith yes with Repl. 67442

Total No. of visits 9

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The End, Tube, Combustion Chamber and manhole compensating plates have been flanged annealed. machined & fitted here and have since been dispatched to Ferrol where the boiler is to be constructed. The material and workmanship are good
The approved plan is forwarded with S.H. & W.R.'s No. 960
This report is forwarded for the information of the Committee

Survey Fee ... ... £ Proportion fee to be forwarded by Newcastle When applied for. Sub. 29/4/15 191

Travelling Expenses (if any) £ When received, ____ 191

Reginald A Bain

Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute FRI. 28 SEP. 1917

Assigned ____

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