

REPORT ON BOILERS.

No. 12394

Received at London Office **TUE 24 FEB. 1920**

Date of writing Report 19 When handed in at Local Office 23.2.1920 Port of Aberdeen
 No. in Survey held at Aberdeen Date, First Survey 24.9.19 Last Survey 21st February 1920
 Reg. Book. on the BOILER No. S. fitted in S.S. "Striver" No. 453. (Number of Visits) Gross 1590.08
 Tons Net 293.30
 Master Built at Aberdeen By whom built The J. Guthrie & Co. S.S. Co. When built 1920
 Engines made at Middlesbrough By whom made Richardson, Nutgark & Co. 1896, Committed by Nelson & Co. 1919
 Boilers made at Aberdeen By whom made A. Hall & Co. Ltd when made 1920
 Registered Horse Power Owners Shipping Investments Ltd. (C. H. Pile Mgr.) Port belonging to London

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY. Manufacturers of Steel S. Colville Sons Ltd.

(Letter for record (S)) Total Heating Surface of Boilers 1440.7 Is forced draft fitted no No. and Description of Boilers One cyl. mult. single ended Working Pressure 185 180 Tested by hydraulic pressure to 400 lbs Date of test 12.1.20
 No. of Certificate 980 Can each boiler be worked separately Area of fire grate in each boiler 48 No. and Description of safety valves to each boiler Two direct spring Area of each valve 5.93 Pressure to which they are adjusted 187 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 or woodwork about 12" Mean dia. of boilers 13.9" Length 10.8"
 Material of shell plates S. Thickness 1 5/16" Range of tensile strength 28-32 Are the shell plates welded or flanged no
 Descrip. of riveting: cir. seams d. lap long. seams double straps Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 1/2" 4 7/8"
 Lap of plates or width of butt straps 18 3/8" x 1 1/2" Per centages of strength of longitudinal joint rivets 85.4 Working pressure of shell by rules 206.6 Size of manhole in shell 16" x 10" Size of compensating ring In. Meil. 3 7/8" No. and Description of Furnaces in each boiler 3 plain Material S. Outside diameter 40" Length of plain part top 6.62" Thickness of plates crown 1 1/8" bottom 1 7/16"
 Description of longitudinal joint weld No. of strengthening rings none Working pressure of furnace by the rules 226 Combustion chamber plates: Material S. Thickness: Sides 3/4" Back 2 3/32" Top 3/4" Bottom 3/4" Pitch of stays to ditto: Sides 10" x 8" Back 9 3/8" x 8 3/4"
 Top 11" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 214.2 Material of stays S. Diameter at smallest part 1 3/4" Area supported by each stay 82.2 Working pressure by rules 224.2 End plates in steam space: Material S. Thickness 1 1/2"
 Pitch of stays 18 1/2" x 18" How are stays secured d. r. r. c. Working pressure by rules 211.1 Material of stays S. Diameter at smallest part 5 1/4"
 Area supported by each stay 332 Working pressure by rules 234.2 Material of Front plates at bottom S. Thickness 1 5/16" Material of Lower back plate S. Thickness 1 5/16" Greatest pitch of stays 13 3/4" x 9 1/2" Working pressure of plate by rules 214.6 Diameter of tubes 5 1/2" ext.
 Pitch of tubes 4 3/8" x 4 3/8" Material of tube plates S. Thickness: Front 1 5/16" r. 3/2" d. 1/2" Back 1 1/2" Mean pitch of stays 9 3/4" Pitch across wide water spaces 14" Working pressures by rules F. 315 - B. 288.8 Girders to Chamber tops: Material S. Depth and thickness of girder at centre 11" x 1 3/4" Length as per rule 36 3/32" Distance apart 11" Number and pitch of Stays in each three 8"
 Working pressure by rules 200.9 Superheater or Steam chest; how connected to boiler None 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

FOR ALEXANDER HALL & CO., LTD.
 The foregoing is a correct description,
A. G. G. G. SECRETARY. Manufacturer.

Dates of Survey } During progress of work in shops - - - } 1919 - Sep. 27 - Oct. 2, 4, 28 - Nov. 10, 15 - Dec. 2, 6, 13, 23, 30 Is the approved plan of boiler forwarded herewith yes
 while building } During erection on board vessel - - - } 1920 - Jan. 8, 12 / 15 - 20 - 28 - Feb. 4, 7, 19 - 26 Total No. of visits 13 9/3/20

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been constructed under Special Survey & in accordance with the Secretary's letters, the Rules, & approved plan: the material & workmanship are good - on completion the boiler was tested by hyd. press. to 400 lbs per sq. inch & found satisfactory. It has now been fitted on board the above named vessel & tried under steam with satisfactory results. The safety valves have been adjusted to the reduced W.P. of 185 lbs per sq. inch for which press. the engines are suitable - For recommendation of class, See Machinery Report Indb. No. 10524.

Survey Fee ... £ 4 : 16 : When applied for, 23.2.1920
 Travelling Expenses (if any) £ : : When received, 8/3/1920

Ridley Yowell & N. Wilson
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute ERI. 5-MAR. 1920
 Assigned See p. vpt. attached

