

Rpt. 5a.

Hull App No. 32319

REPORT ON BOILERS.

No. 11252

Date of writing Report 27th Dec 1919 When handed in at Local Office 31st Nov 1919 Port of Grimsby Received at London Office WLD. 5-NOV. 1919

No. in Survey held at Lincoln Date, First Survey 20th Dec 1918 Last Survey 24th Oct 1919

Reg. Book. on the Boiler for HM Drifter "RADIATION" (Number of Visits 23) Gross 95.97 Tons Net 37.31

Master Bye Goble Built at Bye Goble By whom built J. H. Smith Ouse S.B. Co. Ltd. When built 1920

Engines made at Sowby Bridge By whom made Pollit & Wiggell, Ltd. When made 1919

Boilers made at Lincoln By whom made Ruston & Hornsby (43212) When made 1919

Registered Horse Power _____ Owners Admiralty Port belonging to _____

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel Stewart & Alcock

(Letter for record 5) Total Heating Surface of Boilers 8144 Is forced draft fitted no No. and Description of Boilers one simplex Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 24.10.19

No. of Certificate 184 Can each boiler be worked separately yes Area of fire grate in each boiler 305 sq ft No. and Description of safety valves to each boiler 2 Direct Spring Area of each valve 3.98 sq in 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 yes

Smallest distance between boilers or uptakes and bunkers or woodwork alt. 7" Mean dia. of boilers 10'-0" Length 9'-6"

Material of shell plates Steel Thickness 27/32 Range of tensile strength 28/32 tons Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams lap & r long. seams butt & r Diameter of rivet holes in long. seams 15/16 Pitch of rivets 7"

width of butt straps 13 3/4" Per centages of strength of longitudinal joint rivets 86.9 Working pressure of shell by rules 182 lbs Size of manhole in shell 16 x 12" Size of compensating ring 6 1/2 x 27/32 No. and Description of Furnaces in each boiler 2 plain Material Steel Outside diameter 3'-2" Length of plain part 6'-0 9/16" Thickness of plates 1 1/8"

Description of longitudinal joint head No. of strengthening rings none Working pressure of furnace by the rules 176 lbs Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 9/16" Pitch of stays to ditto: Sides 8 x 7 1/2" Back 8 x 7 1/2"

Top 8 x 7" If stays are fitted with nuts or riveted heads none Working pressure by rules 182 lbs Material of stays Steel Area at smallest part 1.480 sq in Area supported by each stay 600 sq in Working pressure by rules 197 End plates in steam space: Material Steel Thickness 7/8"

Pitch of stays 14 x 14" How are stays secured stanchions & washers Working pressure by rules 182 lbs Material of stays Steel Area at smallest part 3.40 sq in

Area supported by each stay 1960 sq in Working pressure by rules 182 lbs Material of Front plates at bottom Steel Thickness 7/8" Material of Lower back plate Steel Thickness 7/8" Greatest pitch of stays 13 1/2 x 7 1/2" Working pressure of plate by rules 230 lbs Diameter of tubes 3 1/2"

Pitch of tubes 4 1/2 x 4 3/8" Material of tube plates Steel Thickness: Front 7/8" Back 1 1/8" Mean pitch of stays 9.9" Pitch across wide water spaces 13 1/2 (18 1/2) Working pressures by rules 173 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8 x 14" Length as per rule 28 1/2" Distance apart 7" Number and pitch of Stays in each 208

Working pressure by rules 190 lbs 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 _____

PERHEATER. 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 _____

The foregoing is a correct description,
Ruston & Hornsby Ltd Manufacturer.
per C. D. Barber

Dates During progress of work in shops: 20th Dec 1918, Jan 9, 21, Feb 4, Mar 4, Apr 3, 29, May 8, 14, 27, June 18, 30, July 4, 11, 17, 25, Aug 12, 22, Sep 3, 17, Oct 7, 21, 24 1919

while During erection on board vessel: _____

Is the approved plan of boiler forwarded herewith per C. D. Barber

Total No. of visits 23

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been constructed under special survey and in accordance with approved plan. Material & workmanship are good and together with mounting found satisfactory under hydraulic test. The boiler has been properly tested & secured on board the Drifter "Radiation", and its safety valves adjusted under steam and tested for accumulation.

Survey Fee ... £ 4:10 When applied for 27th Oct 1919

Travelling Expenses (if any) £ _____ When received 19.12.1919

Committee's Minute TUE. JAN. 4 1921

Signed _____

P. Fitzgerald
R. Mitchell
Engineer Surveyor to Lloyd's Register of Shipping.
S. J. Doddart
Boiler maker for J. & S. Smith, Rye