Rept. 5a.

REPORT ON BOILERS.

No. 18953.

Received at London Office 5 SEP 1928

Date of writing Report 18/8/1928 When handed in at Local Office 1st SEPTEMBER 1928 Port of Greenock

No. in Reg. Book. Survey held at Greenock Date, First Survey 12th September 1924 Last Survey 31st August 1928.

(Number of Visits ✓)

on the S/S "Aelybryn" Tons { Gross / Net

Master Built at Glasgow By whom built Lithgow Ltd (811) When built 1928

Engines made at Greenock By whom made Rankin & Blackmore Ltd (428) When made 1928

Boilers made at ditto By whom made ditto (428) When made 1928.

Registered Horse Power Owners Beynon Steamship Co Ltd Port belonging to Swansea

MULTITUBULAR BOILERS—MAIN, [redacted].—Manufacturers of Steel Wilhelmsburger Bergbau

Letter for record S) **Total Heating Surface of Boilers** 6489 ✓ Is forced draft fitted yes ✓ **No. and Description of Boilers** 3 Single Ended 3SB. **Working Pressure** 200 ✓ Tested by hydraulic pressure to 350 ✓ Date of test 20.6.28 No. of Certificate 1831. Can each boiler be worked separately yes ✓ **Area of fire grate in each boiler** 58 ✓ No. and Description of safety valves to each boiler 2 Direct Spring Cockburn Improved High Lift ✓ Area of each valve 4.9 □" ✓ Pressure to which they are adjusted 205 ✓ 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 1'-4" Mean dia. of boilers 14'-6" ✓ Length 11'-6" ✓

Material of shell plates S ✓ Thickness 15/16" ✓ Range of tensile strength 28-32 Are the shell plates welded or flanged ✓

Descrip. of riveting: cir. seams DR. ✓ long. seams TR.DBS ✓ Diameter of rivet holes in long. seams 13/8" Pitch of rivets 9 1/2" ✓

~~Lap of plates or~~ width of butt straps 1' 8 1/4" Per centages of strength of longitudinal joint rivets 91.4 % plate 85.5 % Working pressure of shell by rules 202 Size of manhole in shell 16"×12" ✓ Size of compensating ring 34 1/2 × 29 3/4 × 1 15/16 **No. and Description of Furnaces in each boiler** 3 Corrugated 3C Material S ✓ Outside diameter 3'-9 1/4" ✓ Length of plain part top / bottom ✓ Thickness of plates crown / bottom } 19/32" ✓

Description of longitudinal joint weld. No. of strengthening rings ✓ Working pressure of furnace by the rules 205 Combustion chamber plates: Material S Thickness: Sides 23/32" Back 23/32" Top 23/32" Bottom 25/32" Pitch of stays to ditto: Sides 8 3/8 × 10 5/4 Back 9 1/4 × 9 1/2 Top 10 3/16 × 8 3/4" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 201. Material of stays S Area at smallest part 203.271 □" Area supported by each stay 67.87 □" Working pressure by rules 207 End plates in steam space: Material S Thickness 15/16" ✓

Pitch of stays 19 1/2 × 18 1/2" How are stays secured D.N. ✓ Working pressure by rules 201. Material of stays S Area at smallest part 7.24 □" ✓

Area supported by each stay 260.7 □" Working pressure by rules 202 Material of Front plates at bottom S Thickness 1" Material of lower back plate S Thickness 7/8" Greatest pitch of stays 13 1/4" ✓ Working pressure of plate by rules 206 Diameter of tubes 2 3/4" Pitch of tubes 3 15/16 × 3 7/8" Material of tube plates S Thickness: Front 1" ✓ Back 3/4" ✓ Mean pitch of stays 9.7 Pitch across wide water spaces 13 1/2" ✓ Working pressures by rules 204. Girders to Chamber tops: Material S Depth and thickness of girder at centre 9 3/4 × 13/16 (2) Length as per rule 34.62 ✓ Distance apart 10 3/16" ✓ Number and pitch of Stays in each 3 at 8 3/4" ✓

Working pressure by rules 203 Steam dome: description of joint to shell ~~% 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~~

~~SUPERHEATER. Type 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,
RANKIN & BLACKMORE, LTD.
Manufacturer.
Director.

Dates of Survey while building { During progress of work in shops - - / During erection on board vessel - - - }

See Machinery Report.

Is the approved plan of boiler forwarded herewith yes

Total No. of visits ✓

GENERAL REMARKS (*State quality of workmanship, opinions as to class, &c.*) These boilers have been built under special survey in accordance with the approved plans. The workmanship & material are of good quality. They are now securely fitted on board. (See Rept. accompanying trial of the Machinery)

Survey Fee ... } When applied for, ... 19.....
Travelling Expenses ... } When received, ... 19.....

Charged on Monthly Rept.

Wm. Gordon-Meiklem
Engineer Surveyor to Lloyd's Register of Shipping.

GLASGOW 4 - SEP 1928

Committee's Minute

Assigned See accompanying report. WGM.

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