

REPORT ON BOILERS.

No. 8672

Received at London Office

10 FEB. 14 1922

Date of writing Report 9-2-1922 When handed in at Local Office

Port of Belfast

No. in Survey held at Belfast

Date, First Survey 16 Jan 1920

Last Survey 2 Feb 1922

(Number of Visits 128)

Gross 12361

Reg. Book.

31393 on the

T.S.S. "Sophocles"

Tons

Net 7366

Master T. Gilroy

Built at Belfast

By whom built

Hauland & Wolff Ltd

When built 1922

Engines made at Belfast

By whom made

When made

Boilers made at

By whom made

When made

Registered Horse Power

Owners Geo. Thompson & Co. Ltd

Port belonging to Aberdeen

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.

Manufacturers of Steel D. Colville & Sons Ltd

(Letter for record S) Total Heating Surface of Boilers 2788 sq ft Is forced draft fitted No

Boilers One, by line Single Tube Working Pressure 215 lbs Tested by hydraulic pressure to 375 lbs of test 31-8-21

No. of Certificate 810 Can each boiler be worked separately Yes Area of fire grate in each boiler 65 sq ft No. and Description of

safety valves to each boiler Two - Direct Springs of each valve 9.62 sq Pressure to which they are adjusted 215 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 20" Mean dia. of boilers 15'-9" Length 11'-9"

Material of shell plates Steel Thickness 1 1/2" Range of tensile strength 29-33 tons Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams Lap Rivets long. seams S.B. Double Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 10"

Top of plates or width of butt straps 23 1/2" Per centages of strength of longitudinal joint rivets 98.8 plate 84.07 Working pressure of shell by

rules 221 lbs Size of manhole in shell 16" x 12" Size of compensating ring 11" No. and Description of Furnaces in each

boiler 3 - Marston Material Steel Outside diameter 49 1/2" Length of plain part top 2" bottom 9" Thickness of plates crown 1 1/2" bottom 1 1/2"

Description of longitudinal joint Weld No. of strengthening rings Working pressure of furnace by the rules 228 lbs Combustion chamber

plates: Material Steel Thickness: Sides 2 1/2" Back 4" Top 2 1/2" Bottom 1 1/2" Pitch of stays to ditto: Sides 8 3/4" x 7 1/2" Back 7 1/2" x 9 1/2"

Top 9" x 7 1/2" If stays are fitted with nuts or riveted heads inside Working pressure by rules 219 lbs Material of stays Steel Area at

smallest part 1768 sq ft supported by stay 73 1/2" Working pressure by rule 224 lbs plates in steam space: Material Steel Thickness 1 1/2"

Pitch of stay 8 3/4" x 15 1/2" How are stays secured Nuts & Screws into plates Working pressure by rules 215 lbs Material of stays Steel Area at smallest part 593 sq ft

Area supported by each stay 291 sq ft Working pressure by rules 251 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" x 7 1/2" Working pressure of plate by rules 231 lbs Diameter of tubes 2 1/4"

Pitch of tubes 4" x 4" Material of tube plate Steel Thickness: Front 7/8" Back 1 1/2" Mean pitch of stays 8" x 8" Pitch across wide

water spaces 14" Working pressures by rules 321 lbs with 1 1/2" double Girders to Chamber tops: Material Steel Depth and thickness of

girder at centre 10" x (8" x 2) Length as per rule 36" Distance apart 9" Number and pitch of Stays in each 4-7 1/2"

Working pressure by rules 224 lbs 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 Schmidt

Date of Approval of Plan

Tested by Hydraulic Pressure to 430 + 645 lbs

Date of Test 26-9-21

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes

Diameter of Safety Valve 2"

Pressure to which each is adjusted 220 lbs

Is Easing Gear fitted Yes

The foregoing is a correct description,
FOR HAILAND & WOLFF Ltd

Manufacturer.

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

See other sheet

Is the approved plan of boiler forwarded herewith Yes

Total No. of visits

GENERAL REMARKS

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

See other sheet

Survey Fee ... £

When applied for, 191

Travelling Expenses (if any) £

When received, 191

Committee's Minute

Assigned

TUE 21 FEB. 1922

FRI. 3 NOV. 1922

FRI. MAR. 10 1922

FRI. AUG. 4 1922

FRI. 15 DEC. 1922

FRI. 15 DEC. 1922

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Foundation

003867-003874-0110 1/2

Belfast

T.S.S. "Sophocles"List of Principal items in Spare Gear

- ✓ 1 Propeller Shaft & 6 blades, studs & nuts
- ✓ Sets coupling bolts & nuts for each size used
- 50 Condenser tubes & 100 flanges
- 1 Safety Valve spring for every four pumps of each size
- 2 Boiler feed check valves & 15 plain tubes & 5 stay tubes
- ✓ Sets escape valve springs
- ✓ Sets spare gear for all pumps, oil & feed filters.

Lubrication Gear

- ✓ Escape valve spring of each size
- ✓ 2 Bolts & nuts each size for two bearings
- ✓ - - - main gear wheel bearing
- ✓ - - - Pinion bearing each size
- 5% blaking material
- ✓ 5% total number bolts & nuts each gear case joint
- ✓ Complete set thermometers oil circulating system
- ✓ Set bearing bushes one gear wheel shaft
- ✓ - - - H.P. rotor & for L.P. rotor
- ✓ - - - H.P. 1st Reduction pinion shaft
- ✓ - - - L.P. - - -
- ✓ 1 bearing bush for for² end 1st Redⁿ pinion shaft
- Set bearing bushes - 2nd Redⁿ pinion shaft
- ✓ 1/2 Set packing rings & springs rotor gland
- ✓ Set pads for adjusting block & liners
- ✓ - - - main thrust block

Pumps

2	New Main Feed Pumps	16 1/2" x 11 1/2" x 24"
2	- Main Fire	13 1/2" x 22" x 15"
1	- Hotwell	70" x 10" x 31"
1	- Fresh Water	5 1/2" x 5" x 5"
1	- Aux ^y Fire	12" x 18" x 10"
1	- Feed	7 1/2" x 5 1/2" x 12"
3	- Oil Lubric ⁿ	8" x 9" x 18"
1	- Ballast	9" x 10" x 12"
2	- Bilge	8" x 9" x 9"
1	- General	10 1/2" x 7" x 12"
1	- Sanitary	10 1/2" x 10 1/2" x 15"
2	- Main Circulating	16" bore
1	- Emergency Bilge	9" -

R. L. Bennett



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