

REPORT ON BOILERS.

No. 17739

Received at London Office

WED. NOV. 17 1920

Date of writing Report 13th Nov. 1920. When handed in at Local Office

13/11/1920 Port of Greenock.

No. in Survey held at Port. Glasgow.

Date, First Survey

19th July, 1920 Last Survey

12th Nov. 1920

Reg. Book.

(Number of Visits 15)

Gross 2637.
Tons Net 1545.

on the Steel screw Steamship "ELLEN STUB."

Master C. J. Meyer

Built at Port. Glasgow.

By whom built Ferguson Brothers (Port. Glasgow) Ltd. When built 1920.

Engines made at Ditto

By whom made Ditto

When made 1920.

Boilers made at Port. Glasgow.

By whom made The Clyde Shipbuilding & Engineering Co. Ltd.

When made 1920.

Registered Horse Power 183.

Owners K. J. A. L. Dr. Stub.

Port belonging to Christiania.

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

Letter for record 5

Total Heating Surface of Boilers 627.5 sq. ft. Is forced draft fitted No.

No. and Description of

Boilers One, single ended.

Working Pressure 100 lbs.

Tested by hydraulic pressure to 200 lbs. Date of test 27/9/20.

No. of Certificate 1495. Can each boiler be worked separately -

Area of fire grate in each boiler 24.75 sq. ft. No. and Description of

Safety valves to each boiler Two, spring loaded.

Area of each valve 4.9 sq. in.

Pressure to which they are adjusted 105 lbs.

Are they fitted with easing gear Yes.

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No.

Smallest distance between boilers or uptakes and bunkers or woodwork 16 in.

Inside

Mean dia. of boilers 9' 0 in.

Length 9' 0 3/4 in.

Material of shell plates Steel

Thickness 3/2 in.

Range of tensile strength 28/32 tons

Are the shell plates welded or flanged -

Descrip. of riveting: cir. seams D.R. straps

long. seams Double rivets

Diameter of rivet holes in long. seams 3/4 in.

Pitch of rivets 4.06 in.

Gap of plates or width of butt straps 8 in.

Per centages of strength of longitudinal joint

rivets 91.48%

Working pressure of shell by plate 81.5%

Rules 108 lbs.

Size of manhole in shell 16 in. x 12 in.

Size of compensating ring 33 x 27 x 1/2 in.

No. and Description of Furnaces in each

Boiler Two, plain

Material Steel

Outside diameter 33 9/16 in.

Length of plain part

top 67 1/2 in.

Thickness of plates

crown 1/2 in.

bottom 1/2 in.

Description of longitudinal joint D.R. straps

No. of strengthening rings Nil

Working pressure of furnace by the rules 106 lbs. Combustion chamber

plates: Material Steel

Thickness: Sides 1/2 in.

Back 1/2 in.

Top 1/2 in.

Bottom 1/2 in.

Pitch of stays to ditto: Sides 7 1/2 x 8 1/2 in.

Back 9 x 8 1/2 in.

Top 8 1/2 x 7 1/2 in.

Bottom 8 1/2 x 7 1/2 in.

Area at

smallest part 96 sq. in.

Area supported by each stay 85.25 sq. in.

Working pressure by rules 104 lbs.

End plates in steam space: Material Steel

Thickness 3/4 in.

Pitch of stays 17 x 18 1/2 in.

How are stays secured D.R. nuts

Working pressure by rules 107 lbs.

Material of stays Steel

Area at smallest part 2.31 sq. in.

Area supported by each stay 229.5 sq. in.

Working pressure by rules 104 lbs.

Material of Front plates at bottom Steel

Thickness 3/4 in.

Material of

Lower back plate Steel

Thickness 3/4 in.

Greatest pitch of stays 9 x 8 1/4 in.

Working pressure of plate by rules 100 lbs.

Diameter of tubes 3 1/4 in.

Pitch of tubes 4 1/2 x 4 1/2 in.

Material of tube plates Steel

Thickness: Front 3/4 in.

Back 7/8 in.

Mean pitch of stays 10 1/2 x 8 1/2 in.

Pitch across wide

water spaces 14 1/2 in.

Working pressures by rules 103 lbs.

Girders to Chamber tops: Material Steel

Depth and thickness of

girder at centre 5 1/2 x 3 1/2 x 1 1/4 in.

Length as per rule 25 7/8 in.

Distance apart 8 1/2 in.

Number and pitch of Stays in each Two, 7 1/2 in.

Working pressure by rules 107 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

UPPER HEATER. 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,

James Murray Manufacturer.

Is the approved plan of boiler forwarded herewith Yes.

Total No. of visits 15.

Dates of Survey

During progress of work in shops - -

while building

During erection on board vessel - - -

See accompanying Boiler Report.

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

Workmanship good.

This Donkey Boiler has been constructed under special survey and in

accordance with the Societies' rules & the approved plan, tested by hydraulic pressure

and found tight & sound. It is fitted in stockhold, forward of main boilers.

Survey Fee £

When applied for, 19

Travelling Expenses (if any) £

When received, 19

Committee's Minute

Glasgow 16 NOV 1920

Assigned

See attached machinery report

W. H. L.

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register Foundation

009451-009458-0200