

REPORT ON WATER TUBE BOILERS.

No. 51410

Received at London Office

22 APR 1931

Date of writing Report 7.4.1931

1931

When handed in at Local Office 17.4.1931

Port of Glasgow

No. in
Reg. Bk.

Survey held at

Glydebank

Date, First Survey

19.6.28

Last Survey

13.4.1931

1931

on the Quadruple Screw "Empress of Britain"

Number of Visits 12

Gross
Tons
Net

Master

Built at

Glydebank

By whom built

John Brown & Co. Ltd.

When built

1931

Engines made at

Glydebank

By whom made

John Brown & Co. Ltd.

When made

1931

Boilers made at

do

By whom made

do

When made

1931

Registered Horse Power

Owners

Canadian Pacific S.S. Co.

Port belonging to

London

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

John Brown & Co. Ltd.

(Letter for Record

S.

Date of Approval of plan

6-12-29, 22-3-28

Number and Description or Type

of Boilers

1-Johnson

Working Pressure

425

Tested by Hydraulic Pressure to

688

Date of Test

16-8-28

No. of Certificate

16008

Can each boiler be worked separately

✓

Total Heating Surface of Boilers

10680 & 3840 sq. ft.

Is forced draught fitted

✓

Area of fire grate (coal) in each Boiler

✓

Total grate area of boilers in vessel including

Main and Auxiliary

No. and type of burners (oil) in each boiler

6. Maccana

No. and description of safety valves on

each boiler

3-S.L.I.H.L.

Area of each valve

9.6211

Pressure to which they are adjusted

430

Are they fitted with easing gear

✓

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

Well clay

Height of Boiler

21'-6 5/8"

Width and Length

16'-7" x 17'-5 1/2"

Steam Drums:—Number in each boiler

1

Inside diameter

4'-4 1/2"

Material of plates

S

Thickness

2 3/8"

Range of Tensile Strength

28-32

Are drum shell plates welded or flanged

no

Description of riveting:—

Cir. seams

J.R.

long. seams

none

Diameter of rivet holes in long. seams

✓

Pitch of Rivets

✓

Lap of plate or width of butt straps

none

Thickness of straps

✓

Percentage strength of long. joint:—Plate

✓

Rivet

✓

Diameter of tube holes in drum

22'-2 1/8"-1 3/8"

Pitch of tube holes

4'-4 3/8"-2 7/8"

Percentage strength of shell in way of tubes

42.9

If Drum has a flat side state method of staying

non flat

Depth and thickness of girders at centre

(if fitted)

✓

Distance apart

✓

Number and pitch of stays in each

✓

Working pressure

by rules

✓

Steam Drum Heads or Ends:—Material

S

Thickness

1 23/32"

Radius or how stayed

3'-7 1/2"

Size of Manhole or Handhole

16" x 12"

Water Drums:—Number in each boiler

1

Inside Diameter

41 1/2"

Material of plates

S

Thickness

2 3/4"

Range of tensile strength

✓

Are drum shell plates welded

✓

or flanged

no

Description of riveting:—Cir. seams

lap S.R.

long. seams

✓

Diameter of Rivet Holes in

long. seams

✓

Pitch of rivets

✓

Lap of plates or width of butt straps

✓

Thickness of straps

✓

Percentage strength of long. joint:—Plate

✓

Rivet

✓

Diameter of tube holes in drum

✓

Pitch of tube holes

✓

Percentage strength of drum shell in way of tubes

42.9

Water Drum Heads or Ends:—Material

S

Thickness

1 13/32"

Radius or how stayed

3'-0"

Size of manhole or handhole

16" x 12"

Headers or Sections:—Number

none

Material

S

Thickness

✓

Tested by Hydraulic Pressure to

✓

Material of Stays

✓

Area at smallest part

✓

Area supported by each stay

✓

Working Pressure by Rules

✓

Tubes:—Diameter

✓

Thickness

✓

Number

✓

Steam Dome or Collector:—Description of Joint to Shell

none

Percentage strength of Joint

✓

Diameter

✓

Thickness of shell plates

✓

Material

✓

Description of longitudinal joint

✓

Diameter of Rivet Holes

✓

Pitch of Rivets

✓

Working Pressure of shell

✓

by Rules

✓

Crown or End Plates:—Material

✓

Thickness

✓

How stayed

✓

SUPERHEATER.

Type Johnson

Date of Approval of Plan

6-12-29

Tested by Hydraulic Pressure to

688

Date of Test

16-8-28

Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler

no

Diameter of Safety Valve

✓

Pressure to which each is adjusted

✓

Is easing gear fitted

✓

Is a drain cock or valve fitted at lowest point of superheater

no

Number, diameter, and thickness of tubes

256-1 1/4" x 9 W.C.

Spare Gear. Tubes

✓

Gaskets or joints:—Manhole

✓

Handhole

✓

Handhole plates

✓

See attached list

John Brown & Company, Limited.

The foregoing is a correct description,

J. Henderson

Glydebank Secretary

Dates of Survey: During progress of work in shops 1928 June 19 26 July 28 27 Aug 10 16 Sep 13 Is the approved plan of boiler forwarded herewith 1931 3.6.13 27 Oct 1 1931 Apr 13

while building: During erection on board vessel - - - See accompanying machinery report. Total No. of visits 13

GENERAL REMARKS

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

This Boiler has been built

under special survey in accordance with the approved plans, and the Society's Rules, and requirements, the materials and workmanship are good, it has been securely fitted on board, and the safety valves adjusted under steam.

Survey Fee

...

£

:

:

When applied for,

191

Travelling Expenses (if any) £

:

:

When received,

191

Committee's Minute GLASGOW 21 APR 1931

Assigned SEE ACCOMPANYING MACHINERY REPORT.

Jass Cairns

Engineer Surveyor to Lloyd's Register of Shipping.

CD



Lloyd's Register Foundation

W392-0095