

REPORT ON WATER TUBE BOILERS.

No. 48950

Received at London Office

13 MAR 1929

Date of writing Report

191

When handed in at Local Office

9 3

1929

Port of

Glasgow

No. in Reg. Bk.

Survey held at

Glasgow

Date, First Survey

5 10 27

Last Survey

4 2 March 1929

Number of Visits

39

Tons

Gross 19648

Net 10069

Engines made at

Rugby

By whom made

British Thomson Houston Co.

When made

1929

Boilers made at

Glasgow

By whom made

Messrs James Watson & Co. Ltd. (16749)

When made

1929

Registered Horse Power

Owners

Peninsular & Oriental Steam Navigation Co.

Port belonging to

Glasgow

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel John Brown & Co. Sheffield & Darlington Works Ltd.

(Letter for Record 5) Date of Approval of plan 1-7-27 Number and Description of Type 4 James 17776-7 Tested by Hydraulic Pressure to 650 lb. Date of Test 11-4-29

No. of Certificate 17857 Can each boiler be worked separately y/o Total Heating Surface of Boilers 22800 sq ft (4 tubes)

Is forced draught fitted y/o Area of fire grate (coal) in each boiler 5-6 sq ft Total grate area of boilers in vessel including 7-07 sq ft

Main and Auxiliary No. and type of burners (oil) in each boiler 5-6 sq ft No. and description of safety valves on 2 Improved high lift. Area of each valve 7-07 sq ft Pressure to which they are adjusted 400 lb.

Are they fitted with easing gear y/o In case of donkey boilers state whether steam from main boilers can enter the donkey boiler 16-5 1/2

Smallest distance between boilers or uptakes and bunkers or woodwork 25" Height of Boiler 16-5 1/2 Width and Length 23-0 x 17-2 1/2

Steam Drums:—Number in each boiler 6 One Inside diameter 50" Material of plates 5 Thickness 2 1/2"

Range of Tensile Strength 28-32 tons Are drum shell plates welded or flanged No. Description of riveting:—

Cir. seams DR. overlap! long. seams Solid forged Diameter of rivet holes in long. seams 1/4" Pitch of Rivets 1/4"

Lap of plate or width of butt straps 1 1/4" Thickness of straps 1/4" Percentage strength of long. joint:—Plate 1/4" Rivet 1/4"

Diameter of tube holes in drum 1 1/4" Pitch of tube holes 2 1/2" x 3 1/2" x 1 1/2" Percentage strength of shell in way of tubes 33-3

If Drum has a flat side state method of staying y/o Depth and thickness of girders at centre y/o

(if fitted) y/o Distance apart y/o Number and pitch of stays in each y/o Working pressure y/o

by rules 403. Steam Drum Heads—on Ends:—Material 5 Thickness 1 1/2" Radius on how stayed 60"

Size of Manhole or Handhole 16 x 12 Water Drums:—Number in each boiler 2 One Inside Diameter 23"

Material of plates 5 Thickness 1 1/2" Range of tensile strength 28-32 tons Are drum shell plates welded

or flanged Solid forged! Description of riveting:—Cir. seams DR. overlap! long. seams y/o Diameter of Rivet Holes in

long. seams y/o Pitch of rivets y/o Lap of plates or width of butt straps 1 1/4" Thickness of straps 1/4"

Percentage strength of long. joint:—Plate 1/4" Rivet 1/4" Diameter of tube holes in drum 1 1/4" Pitch of tube holes 2 1/2" x 3 1/2" x 1 1/2"

Percentage strength of drum shell in way of tubes 33-3 Water Drum Heads—on Ends:—Material 5 Thickness 1 1/2"

Radius or how stayed 2 1/2" Size of manhole or handhole 16 x 12 Headers or Sections:—Number y/o

Material y/o Thickness y/o Tested by Hydraulic Pressure to y/o Material of Stays y/o

Area at smallest part y/o Area supported by each stay y/o Working Pressure by Rules y/o Tubes:—Diameter y/o

Thickness y/o Number y/o Steam Dome or Collector:—Description of Joint to Shell y/o

Percentage strength of Joint y/o Diameter y/o Thickness of shell plates y/o Material y/o

Description of longitudinal joint y/o Diameter of Rivet Holes y/o Pitch of Rivets y/o Working Pressure of shell y/o

by Rules y/o Crown or End Plates:—Material y/o Thickness y/o How stayed y/o

SUPERHEATER. Type 20-7-27 Date of Approval of Plan 20-7-27 Tested by Hydraulic Pressure to 650 lb. y/o

Date of Test 4-7-28 Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler y/o

Diameter of Safety Valve See above Pressure to which each is adjusted y/o Is easing gear fitted y/o

Is a drain cock or calce fitted at lowest point of superheater y/o Number, diameter, and thickness of tubes 284: 1 1/2" x 12 L59

Spare Gear. Tubes 16 loops Gaskets or joints:—Manhole y/o Handhole y/o Handhole plates y/o

The foregoing is a correct description, Manufacturer.

YARROW & CO. LTD. SHEFFIELD

21 FEB 1929

ENGINEERS & SHIPBUILDERS

Dates of Survey During progress of work in shops - - - See accompanying Report.

while building During erection on board vessel - - -

Is the approval of boiler forwarded to the

Total No. of visits

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The Boilers have been built under special Survey and in accordance with the Rules and approved plans. The materials and workmanship are good. On completion they have been tested by hydraulic pressure and found tight.

Survey Fee ... See report

Travelling Expenses (if any) £

John Brown

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 12 MAR 1929

TUE. 9 APR 1929

Assigned See accompanying machinery report.