

REPORT ON BOILERS.

No. 8986

Received at London Office

THU. 1 NOV. 1923

Date of writing Report

101

When handed in at Local Office

101

Port of

Belfast

No. in Survey held at
Reg. Book.

on the

New Steel Y.S.S. "Malaja"

Date, First Survey

Last Survey

191

(Number of Visits)

Gross

20834

Net

12830

Master

Built at

Belfast

By whom built

Harland & Wolff Ltd

When built

1923

Engines made at

Belfast

By whom made

Harland & Wolff Ltd

When made

1923

Boilers made at

Belfast

By whom made

Harland & Wolff Ltd

When made

1923

Registered Horse Power

Owners

Peninsular & Oriental Steam Navigation Co

Port belonging to

Belfast

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY OR DONKEY~~

Manufacturers of Steel

David Colville & Sons Ltd

(Letter for record

5)

Total Heating Surface of Boilers

35244 sq ft

Is forced draft fitted

yes

No. and Description of

16-2-23

Boilers

Six Double ended

Working Pressure

215 lbs

Tested by hydraulic pressure to

343 lbs

Date of test

9-3-23

No. of Certificate

822423

Can each boiler be worked separately

yes

Area of fire grate in each boiler

Oil fuel

No. and Description of

(146.54 # Coal)

safety valves to each boiler

4 Spring loaded in one chest

Area of each valve

9.62 sq in

Pressure to which they are adjusted

220 lbs

Are they fitted with easing gear

yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

yes

Smallest distance between

boilers or uptakes and bunkers or woodwork

20"

Mean dia. of boilers

16'-6"

Length

20'-0"

Material of shell plates

Steel

Thickness

1 1/2"

Range of tensile strength

30-33 tons

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

ends P.R.

long. seams

T.R.

D.B.S.

Diameter of rivet holes in long. seams

1 7/16"

Pitch of rivets

10 1/2"

Lap of plates or width of butt straps

1'-11"

Per centages of strength of longitudinal joint

rivets 84.6

plate 85.11%

Working pressure of shell by

rules

rules

224 lbs

Size of manhole in shell

16" x 12"

Size of compensating ring

2 @ 36" x 32" x 1 1/4"

No. and Description of Furnaces in each

boiler

Description of longitudinal joint

Weld

No. of strengthening rings

yes

Working pressure of furnace by the rules

226.5 lbs

Combustion chamber

plates: Material

Steel

Thickness: Sides

2 1/2"

Back

2 1/2"

Top

2 1/2"

Bottom

Pitch of stays to ditto: Sides

8" x 8"

Back

dia

at

Top

4" x 8" x 9"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

239 lbs

Material of stays

Steel

Thickness

1"

smallest part

1 1/2" x 1 1/2"

Area supported by each stay

65 sq in

Working pressure by rules

234 lbs

End plates in steam space: Material

Steel

Thickness

1"

Pitch of stays

16" x 15 1/2"

How are stays secured

D.N. Wash

Working pressure by rules

226.5 lbs

Material of stays

Steel

Area at smallest part

5.05

Area supported by each stay

246 sq in

Working pressure by rules

222 lbs

Material of Front plates at bottom

Steel

Thickness

7/8"

Material of

Lower back plate

yes

Thickness

Greatest pitch of stays

Pitch of tubes

4" x 4 1/2"

Material of tube plates

Steel

Thickness: Front

7/8"

Back

1 1/2"

Mean pitch of stays

9"

Pitch across wide

water spaces

13 3/4"

Working pressures by rules

254 lbs

Girders to Chamber tops: Material

Steel

Depth and thickness of

girders at centre

2 @ 8" x 7 1/8"

Length as per rule

4'-2 7/8"

Distance apart

4' 3 1/4" - 8' 4"

Number and pitch of Stays in each

6'-7 1/4"

Working pressure by rules

259 lbs

Steam dome: description of joint to shell

none

% of strength of joint

yes

Diameter

yes

Thickness of shell plates

yes

Material

yes

Description of longitudinal joint

yes

Diam. of rivet holes

yes

Pitch of rivets

yes

Working pressure of shell by rules

yes

Crown plates

yes

Thickness

yes

How stayed

yes

SUPERHEATER.

Type

External tubular

Date of Approval of Plan

13-2-22

Tested by Hydraulic Pressure to

430 lbs

Date of Test

Oct 5th 1923

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

For HARLAND & WOLFF Ltd

The foregoing is a correct description,

J.D. Keay

Manufacturer.

Is the approved plan of boiler forwarded herewith

yes

Total No. of visits

yes

Dates of Survey

During progress of

work in shops - -

while

During erection on

building

board vessel - - -

GENERAL REMARKS

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

These boilers have been

built under special survey, materials & workmanship good

Hydraulic tests satisfactory.

Survey Fee ... £

When applied for, 191

Travelling Expenses (if any) £

When received, 191

Committee's Minute

Assigned

TUE NOV. 6 1923

William Butler

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register

Foundation