

REPORT ON MACHINERY.

TUES MAR 2 1897

Port of

Glasgow

Received at London Office

18

No. in
Reg. Book.

Survey held at

Supplementary Report

Date, first Survey

Last Survey

18

(Number of Visits)

on the 2 Single Enda hulled. S.S. Hakata Maru.

Tons
Gross
Net

Master

Built at

By whom built

When built

Engines made at

By whom made

when made

Boilers made at

Glasgow

By whom made

D & W Henderson & Co

when made

1896

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28

Is Electric Light fitted

ENGINES, &c.—Description of Engines

No. of Cylinders

No. of Cranks

Diameter of Cylinders

Length of Stroke

Revolutions per minute

Diameter of Screw shaft

as per rule.
as fitted.

Diameter of Tunnel shaft

as per rule.

as fitted.

Diameter of Crank shaft journals

Diameter of Crank pin

Size of Crank webs

Diameter of screw

Pitch of screw

No. of blades

State whether moveable

Total surface

No. of Feed pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Bilge pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Donkey Engines

Sizes of Pumps

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room

In Holds, &c.

No. of bilge injections

sizes

Connected to condenser, or to circulating pump

Is a separate donkey suction fitted in Engine room & size

Are all the bilge suction pipes fitted with roses

Are the roses in Engine room always accessible

Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship

Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Are the discharge pipes above or below the deep water line

Are they each fitted with a discharge valve always accessible on the plating of the vessel

Are the blow off cocks fitted with a spigot and brass covering plate

What pipes are carried through the bunkers

How are they protected

Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges

When were stern tube, propeller, screw shaft, and all connections examined in dry dock

Is the screw shaft tunnel watertight

Is it fitted with a watertight door

worked from

BOILERS, &c.—

(Letter for record

S

)

Total Heating Surface of Boilers

See other report

Is forced draft fitted

no

No. and Description of Boilers 2 Single ended boilers

Working Pressure

200 lbs

Tested by hydraulic pressure to

400 lbs

Date of test

12.11.96

Can each boiler be worked separately

yes

Area of fire grate in each boiler

50 sq ft

No. and Description of safety valves to

see other reports.

each boiler

2 Spring loaded

Area of each valve

4'9 sq in

Pressure to which they are adjusted

205 lbs

Are they fitted

with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

stands clear

Mean diameter of boilers

159"

Length

10'0"

Material of shell plates

Steel

Thickness

1 1/16"

Description of riveting: circum. seams

lap & Rivets

long. seams

Double Keel 5 kind

Diameter of rivet holes in long. seams

1 1/16"

Pitch of rivets

9 7/8"

Lap of plates or width of butt straps

21 3/4 x 1 1/16"

Per centages of strength of longitudinal joint

rivets

87.3

plate

85.07

Working pressure of shell by rules

225 lbs

Size of manhole in shell

12" x 16"

Size of compensating ring

McNells

No. and Description of Furnaces in each boiler

3 Morrison's

Material

Steel

Outside diameter

41 1/2"

Length of plain part

top

7'1"

Thickness of plates

crown

9 1/16"

Description of longitudinal joint

weld

No. of strengthening rings

currup.

Working pressure of furnace by the rules

213 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

45/64"

Back

21/32"

Top

1/16"

Bottom

7/8 x 2

Thens

Working pressure by rules

202 lbs

Pitch of stays to ditto: Sides

9"

Back

8 1/2"

Top

9 x 7 1/2"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

202 lbs

Material of stays

Steel

Diameter at smallest part

2'31 1/4 in

Area supported by each stay

89'2 sq in

Working pressure by rules

233 lbs

End plates in steam space:

Material

Steel

Thickness

7/16"

Pitch of stays

18" x 17 1/4"

Material

Steel

Thickness

7/16"

Pitch of stays

18" x 17 1/4"

How are stays secured

double nuts & doubling strips

Working pressure by rules

214 lbs

Material of stays

Steel

Diameter at smallest part

7'5 1/4 in

Area supported by each stay

311 1/4 in

Working pressure by rules

217 lbs

Material of Front plates at bottom

Steel

Thickness

7/8"

Material of Lower back plate

Steel

Thickness

7/8"

Greatest pitch of stays

12 1/4"

Diameter of tubes

3 1/4"

Pitch of tubes

4 1/8 to 4 1/16 x 4 3/8"

Material of tube plates

Steel

Thickness: Front

1"

Back

25/32"

Mean pitch of stays

10'2"

Pitch across wide water spaces

14"

Working pressures by rules

approved

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

8" x 2 x 1"

Length as per rule

25 3/4"

Distance apart

9"

Number and pitch of Stays in each

2 x 7 1/2"

Working pressure by rules

299 lbs

Superheater or Steam chest; how connected to boiler

none

Can the superheater be shut off and the boiler worked

separately

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

holes

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

If stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

Lloyd's Register

Foundation

GLS177-0078

15019 92

DONKEY BOILER— Description

Made at _____ By whom made _____ When made _____ Where fixed _____

Working pressure _____ tested by hydraulic pressure to _____ No. of Certificate _____ Fire grate area _____ Description of safety valves _____

No. of safety valves _____ Area of each _____ Pressure to which they are adjusted _____ If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____

Diameter of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____

Description of riveting long. seams _____ Diameter of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____

Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Thickness of shell crown plates _____ Radius of do. _____ No. of Stays to do. _____

Dia. of stays _____ Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____

Thickness of furnace crown plates _____ Stayed by _____ Working pressure of shell by rules _____

Working pressure of furnace by rules _____ Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____

SPARE GEAR. State the articles supplied :—

The foregoing is a correct description,
David Henderson Manufacturer.

Dates of Survey while building

During progress of work in shops - - -

During erection on board vessel - - -

Total No. of visits

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

Certificate (if required) to be sent to
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee..	£	:	:	When applied for,
Special	£	:	:18.....
Donkey Boiler Fee	£	:	:	When received,
Travelling Expenses (if any) £	:	:	:18.....

C. J. Stevenson
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute
Assigned
TUES MAR 2 1897