

Rpt. 4.

## REPORT ON MACHINERY.

No. 6937

Port of

Received at London Office

No. in Survey held at

Stockton-on-Tees

Date, first Survey

14th March

Last Survey

20th July 1911

Reg. Book.

on the

Steel Screw Steamer "ROKKOSAN MARU" (No. 560)

Master

M. Maeda

Built at

Middlesbrough

By whom built

Sir Raylton Dixon &amp; Co. Ltd.

Tons

Gross 2020.23  
Net 1101.13

When built 1911

Engines made at

Stockton

By whom made

Messrs Blair &amp; Co. (No. 1702)

when made 1911

Boilers made at

Stockton

By whom made

Messrs Blair &amp; Co. Ltd.

when made 1911

Registered Horse Power

Owners Mitsui Bussan Kaisha Ltd

Port belonging to Niike

Nom. Horse Power as per Section 28 240

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

ENGINES, &amp;c.—Description of Engines

Tri-compound

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders

21-35-57

Length of Stroke

39

Revs. per minute

70

Dia. of Screw shaft

as per rule 12.06  
as fitted 13.5

Material of

Ing Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

yes

Is the after end of the liner made water tight

in the propeller boss yes If the liner is in more than one length are the joints burned in one If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive fits tightly If two liners are fitted, is the shaft lapped or protected between the liners

Length of stern bush 4'-6"

Dia. of Tunnel shaft

as per rule 10.57  
as fitted none

Dia. of Crank shaft journals

as per rule 11.09  
as fitted 11.5

Dia. of Crank pin 12"

Size of Crank webs 23 1/4 x 7 1/4

Dia. of thrust shaft under

collars 12"

Dia. of screw

15'-0"

Pitch of Screw

16'-3"

No. of Blades 4

State whether moveable

yes

Total surface

64 3/4 sq

No. of Feed pumps 2

Diameter of ditto 2 1/2"

Stroke 28

Can one be overhauled while the other is at work

yes

No. of Bilge pumps 2

Diameter of ditto 4

Stroke 28

Can one be overhauled while the other is at work

yes

No. of Donkey Engines 2

Sizes of Pumps

Ballast 10' x 10'  
Feed 4 1/2 x 6

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

In Engine Room 3 @ 3"

In Holds, &amp;c. 2 @ 3" in each hold

No. of Bilge Injections 1

sizes 4 1/2"

Connected to condenser, or to circulating pump

yes

Is a separate Donkey Suction fitted in Engine room &amp; size

yes - 3"

Are all the bilge suction pipes fitted with roses

yes

Are the roses in Engine room always accessible

yes

Are the sluices on Engine room bulkheads always accessible

none

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

yes

Are they Valves or Cocks

both

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

yes

Are the Discharge Pipes above or below the deep water line

above

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

yes

Are the Blow Off Cocks fitted with a spigot and brass covering plate

yes

What pipes are carried through the bunkers

none

How are they protected

yes

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

yes

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

yes

Dates of examination of completion of fitting of Sea Connections

30.5.11

of Stern Tube

26.5.11

Screw shaft and Propeller

15.6.11

Is the Screw Shaft Tunnel watertight

none

Is it fitted with a watertight door

yes

worked from

yes

BOILERS, &amp;c.—(Letter for record (S))

Manufacturers of Steel

Messrs J. Spencer &amp; Sons

Total Heating Surface of Boilers

3963

Is Forced Draft fitted

no

No. and Description of Boilers

2 Single ended

Working Pressure

180

Tested by hydraulic pressure to

360

Date of test

9.6.11

No. of Certificate

4667

Can each boiler be worked separately

yes

Area of fire grate in each boiler

60 sq

No. and Description of Safety Valves to

each boiler

2 direct spring

Area of each valve

9.62

Smallest distance between boilers or uptakes and bunkers or woodwork

15"

dia. of boilers

15'-0"

Length

10'-0"

Material of shell plates

steel

Thickness

1 1/2

Range of tensile strength

28-32

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

2 riv lap

long. seams

2B-3 Riv

Diameter of rivet holes in long. seams

1 1/4"

Pitch of rivets

8 1/2"

Lap of plates or

width of butt straps

18 x 1 1/2

Per centages of strength of longitudinal joint

rivets 88.1  
plate 85.29

Working pressure of shell by rules

185

Size of manhole in shell

16" x 12"

Size of compensating ring

7 1/2 x 1 1/2

No. and Description of Furnaces in each boiler

3 Morrison

Material

steel

Outside diameter

45 3/8

Length of plain part

top

Thickness of plates

crown 7/8  
bottom 7/8

Description of longitudinal joint

welded

No. of strengthening rings

yes

Working pressure of furnace by the rules

192

Combustion chamber plates: Material

steel

Thickness: Sides

4/8

Back

4/8

Pitch of stays to ditto: Sides

9 1/2 x 9 1/2

Back

9 x 9

Top

10 x 8 1/2

If stays are fitted with nuts or riveted heads

nuts

Material of stays

steel

Diameter at smallest part

1.59

Area supported by each stay

87.5

Working pressure by rules

205

Material

steel

Thickness

1 1/2

Pitch of stays

20 1/2

How are stays secured

nuts &amp; washers

Diameter at smallest part

3.04

Area supported by each stay

385

Working pressure by rules

195

Material of Front plates at bottom

steel

Thickness

1 1/2

Material of Lower back plate

steel

Thickness

1 1/2

Greatest pitch of stays

14 1/2 x 18

Diameter of tubes

3 1/4

Pitch of tubes

4 1/2 x 4 5/8

Material of tube plates

steel

Thickness: Front

1 1/2

Pitch across wide water spaces

14 1/4"

Working pressures by rules

187

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

7 1/4 x 1 1/2"

Length as per rule

26 1/2

Distance apart

10"

Number and pitch of stays in each

2 @ 8 3/4"

Working pressure by rules

194

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

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

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

yes

yes

yes

yes

yes

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

yes

yes

yes

yes

yes

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

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Working pressure of end plates

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yes

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

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yes

yes

yes

yes

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

yes

yes

yes

yes

yes



