

REPORT ON MACHINERY

No. 6122

TUE. OCT. 24. 1911

Date of writing Report

19

When handed in at Local Office

OCT 28 1911

Port of

NEWCASTLE ON TYNE.

No. in Survey held at
Reg. Book.

Newcastle on Tyne

Date, First Survey 19th Apr. 1911 Last Survey 18th Oct. 1911

on the

S. S. Cho Sen Maru

(Number of Visits 45)

Master

Built at Walker

By whom built

Armstrong Whitworth & Co

Tons { Gross 2832

Net 1804

When built 1911

Engines made at

Wallend

By whom made

North Eastern Marine Eng^g Co L^{td} when made 1911

Boilers made at

Wallend

By whom made

Sillo

when made 1911

Registered Horse Power

Owners

Osaka Shosen Kaisha

Port belonging to

Osaka

Nom. Horse Power as per Section 28

279

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Inverted triple expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

22", 37", 61"

Length of Stroke

42"

Revs. per minute

70

Dia. of Screw shaft

as per rule 12.75"

Material of

Iron

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

Yes

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

Yes

If two

liners are fitted, is the shaft lapped or protected between the liners

Length of stern bush

4' 8"

Dia. of Tunnel shaft

as per rule 11.18"

Dia. of Crank shaft journals

as per rule 11.74"

Dia. of Crank pin

12"

Size of Crank webs

25 1/2 x 7 1/2"

Dia. of thrust shaft under

collars

12"

Dia. of screw

16' 0"

Pitch of Screw

16' 0"

No. of Blades

4

State whether moveable

No

Total surface

78 sq ft

No. of Feed pumps

2

Diameter of ditto

3 1/4"

Stroke

24"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

3 1/2"

Stroke

24"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

2

Sizes of Pumps

F. 6 x 4 x 6; B. 7 1/2 x 9 x 10

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

In Engine Room

4 of 3"

In Holds, &c.

2 of 3" to each x 1 of 2 1/2"

Tunnel well

No. of Bilge Injections

1

sizes

4"

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size

Yes - 3 1/2"

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

Yes

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

nil

How are they protected

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

28.8.11

of Stern Tube

28.8.11

Screw shaft and Propeller

19.9.11

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

top platform

BOILERS, &c.—(Letter for record S)

Manufacturers of Steel

J. S. Spencer & Sons

Total Heating Surface of Boilers

3648 sq ft

Is Forced Draft fitted

Yes

No. and Description of Boilers

2 S.E. Cyl^l - Invert^d

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

25.8.11

No. of Certificate

8185

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

46.3 sq ft

No. and Description of Safety Valves to

each boiler

2 spring patent

Area of each valve

8.29 sq in

Pressure to which they are adjusted

180 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

15"

Mean dia. of boilers

13' 6"

Length

11' 6"

Material of shell plates

steel

Thickness

1 3/32"

Range of tensile strength

28 1/2/32

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

d & v. lap

long. seams

L & d & v. s.

Diameter of rivet holes in long. seams

1 3/16"

Pitch of rivets

8 1/8"

Lap of plates or width of butt straps

17 3/4"

Per centages of strength of longitudinal joint

rivets 92-6

plate 85-3

Working pressure of shell by rules

184.7 lbs

Size of manhole in shell

16 x 12"

Size of compensating ring

flanged

No. and Description of Furnaces in each boiler

3 Brighton

Material

steel

Outside diameter

40"

Length of plain part

top 1"

Thickness of plates

crown 1 1/2"

Description of longitudinal joint

weld

No. of strengthening rings

Yes

Working pressure of furnace by the rules

188 lbs

Combustion chamber plates: Material

steel

Thickness: Sides

23/32"

Back

23/32"

Top

23/32"

Pitch of stays to ditto: Sides

10 1/2 x 9 3/8"

Back

10 1/2 x 9 3/8"

Top

10 1/2 x 9 3/8"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

180-5 lbs

Material of stays

steel

Diameter at smallest part

2-03"

Area supported by each stay

98.437 sq in

Working pressure by rules

185 lbs

End plates in steam space:

Material

steel

Thickness

1 3/8"

Pitch of stays

19 x 25"

How are stays secured

d & v. s.

Working pressure by rules

182 lbs

Material of stays

steel

Diameter at smallest part

8-29"

Area supported by each stay

475 sq in

Working pressure by rules

184 lbs

Material of Front plates at bottom

steel

Thickness

1"

Material of Lower back plate

steel

Thickness

15/16"

Greatest pitch of stays

14 1/2 x 10 1/2"

Working pressure of plate by rules

189 lbs

Diameter of tubes

3 1/4"

Pitch of tubes

4 1/2 x 4 5/8"

Material of tube plates

steel

Thickness: Front

1"

Back

13/16"

Mean pitch of stays

9 1/4 x 9"

Pitch across wide water spaces

14 1/2"

Working pressures by rules

182 lbs

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

9 x 15 1/8"

Length as per rule

32"

Distance apart

10 1/2"

Number and pitch of stays in each

2-9 3/8"

Working pressure by rules

184 lbs

Superheater or Steam chest; how connected to boiler

Yes

Can the superheater be shut off and the boiler worked

separately

Yes

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

VERTICAL DONKEY BOILER—Manufacturers of Steel

No. _____ Description _____
 Made at _____ By whom made _____ When made _____ Where fixed _____
 Working pressure _____ tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safety _____
 Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____
 If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____ Dia. of donkey boiler _____ Length _____
 Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long. seams _____
 Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Plates _____
 Working pressure of shell by rules _____ 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 _____
 Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Radius of do. _____ Stayed by _____
 Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— 2 top end, 2 bottom end, 2 main bearing & 1 set of coupling bolts, 1 set-feed & bilge pump valves, Bolts & nuts assorted & iron of sizes, Propeller & Propeller shaft

The foregoing is a correct description,
 NORTH EASTERN MARINE ENGINEERING CO., LTD.

Manufacturer.

Dates of Survey while building
 During progress of work in shops—
 During erection on board vessel—
 Total No. of visits

1911
 Cyl. 19. May. 4. 9. 11. 12. 15. 18. 22. 29. Jun. 1. 9. 12. 15. 27. 28. 30. Jul. 3. 5. 7.
 14. 18. 19. 20. 21. 25. 27. Aug. 2. 10. 17. 23. 25. 28. 30. Sep. 8. 13. 14. 15. 18. 19. 21. 22. 27. Oct. 11. 17. 18.

Is the approved plan of main boiler forwarded herewith Yes
 " " " donkey " " " Please return for duplicate job

Dates of Examination of principal parts—Cylinders 24. 8. 11 Slides 24. 8. 11 Covers 24. 8. 11 Pistons 24. 8. 11 Rods 24. 8. 11
 Connecting rods 24. 8. 11 Crank shaft 10. 8. 11 Thrust shaft 25. 7. 11 Tunnel shafts 10. 8. 11 Screw shaft 17. 8. 11 Propeller 8. 9. 11
 Stern tube 25. 8. 11 Steam pipes tested 17. 10. 11 Engine and boiler seatings 28. 8. 11 Engines holding down bolts 19. 9. 11
 Completion of pumping arrangements 21. 9. 11 Boilers fixed 19. 9. 11 Engines tried under steam 4. 10. 11
 Main boiler safety valves adjusted 4. 10. 11 Thickness of adjusting washers P.P. 9/16 P.S. 1/2; S.P. 1/2; S.S. 1/2
 Material of Crank shaft Steel Identification Mark on Do. C.C. 10. 8. 11 Material of Thrust shaft Steel Identification Mark on Do. R.W.C. 25. 7. 11
 Material of Tunnel shafts Iron Identification Marks on Do. C.C. 10. 8. 11 Material of Screw shafts Iron Identification Marks on Do. H.C. 17. 8. 11
 Material of Steam Pipes Iron Test pressure 540 lbs

General Remarks (State quality of workmanship, opinions as to class, &c. The Machinery of this vessel has been constructed under special survey, the workmanship and materials used are both of good quality, the Engines have been tried under steam ahead & astern and worked satisfactorily

I beg to recommend that this vessel is eligible in my opinion to have the record L.M.C. 10. 11 in the Register Book

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 10. 11.
 F.D.

The amount of Entry Fee .. £ 2 : 0 : 0 When applied for, OCT 23 1911
 Special .. £ 33 : 19 : 0
 Donkey Boiler Fee .. £ : :
 Travelling Expenses (if any) £ : : When received, 28. 10. 1911

Committee's Minute

Assigned

FRI. OCT. 27. 1911

+ L.M.C. 10. 11

R.W. Coomber.

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



© 2020

Lloyd's Register Foundation