

REPORT ON MACHINERY.

Port of Glasgow

Received at London Office MON. APL 13 1896

No. in Survey held at Renfrew
Reg. Book.

Date, first Survey 21st Sept 1895 Last Survey 10 April 1896
(Number of Visits 31)

on the S. S. Okinawa Maru

Tons { Gross 2109
Net 1042

Master J. F. Allen Built at Renfrew By whom built Lobnitz & Co

When built 1896

Engines made at Renfrew By whom made Lobnitz & Co when made 1896

Boilers made at Renfrew By whom made Lobnitz & Co when made 1896

Registered Horse Power _____ Owners The Imperial Japanese Govt Port belonging to Tokio.

Nom. Horse Power as per Section 28 313

ENGINES, &c.— Description of Engines Twin screw Triple Expansion No. of Cylinders Six

Diameter of Cylinders 18, 30, 48" Length of Stroke 36" Revolutions per minute _____ Diameter of Screw shaft as per rule 9"
as fitted 10"

Diameter of Tunnel shaft as per rule 9 1/2" Diameter of Crank shaft journals 9 3/4" Diameter of Crank pin 10" Size of Crank webs 7 x 19 1/2"
as fitted 9 1/4"

Diameter of screw 12' 0" Pitch of screw 15' 0" to 16' 0" No. of blades four each State whether moveable yes Total surface 37 1/2 sq. each

No. of Feed pumps 2 to each engine Diameter of ditto 3 1/2" Stroke 9" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 to each engine Diameter of ditto 4" Stroke 9" Can one be overhauled while the other is at work yes

No. of Donkey Engines five Sizes of Pumps Ward 9 x 7 x 18, Duplex lead 7 x 5 x 6, Service 7 x 5 x 6, No. and size of Suctions connected to both Bilge and Donkey pumps
single Ballast 9 x 12 x 9, Donkey lead 4 x 2 x 4, 4" lifts

In Engine Room Three 3" In Holds, &c. Forward two 3", in aft hold one 2 1/2"

No. of bilge injections 2 sizes 4" Connected to condenser, or to circulating pump each pump Is a separate donkey suction fitted in Engine room & size one 4"

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 bilge & Ballast pipes How are they protected Covered in

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

When were stern tube, propeller, screw shaft, and all connections examined in dry dock before launching Is the screw shaft tunnel watertight apparently

Is it fitted with a watertight door yes worked from upper platform

BOILERS, &c.— (Letter for record 5) Total Heating Surface of Boilers 5040

No. and Description of Boilers two double ended Working Pressure 175 lbs Tested by hydraulic pressure to 350 lbs

Date of test 16.1.96 Can each boiler be worked separately yes Area of fire grate in each boiler 99 sq ft No. and Description of safety valves to each boiler two spring loaded Area of each valve 10.32 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 on woodwork 12" Mean diameter of boilers 16 1/2"

Length 16' 6" Material of shell plates Steel Thickness 1 1/4" Description of riveting: circum. seams lap 2 x 3 kinds long seams J-Butts 5 kinds

Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8" Lap of plates or width of butt straps 18"

Per centages of strength of longitudinal joint rivets 91.6 Working pressure of shell by rules 188 lbs Size of manhole in shell 13 x 17"
plate 84.4

Size of compensating ring no Nils No. and Description of Furnaces in each boiler in Morrison Material Steel Outside diameter 40"

Length of plain part top 62 tubes Thickness of plates crown 2 1/2" Description of longitudinal joint weld No. of strengthening rings corrugated
bottom 52

Working pressure of furnace by the rules 189 lbs Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back none Top 9/16" Bottom 7/8"

Pitch of stays to ditto: Sides 7 7/8" Back — Top 7 7/8 x 7 7/8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 176 lbs

Material of stays Steel Diameter at smallest part 1 1/2 sq in Area supported by each stay 62 sq in Working pressure by rules 187 lbs End plates in steam space: Material Steel Thickness 1 5/16" Pitch of stays 14 1/2 x 16" How are stays secured Double nuts & washers Working pressure by rules 234 lbs Material of stays Steel

Diameter at smallest part 4 7/8 sq in Area supported by each stay 232 sq in Working pressure by rules 185 lbs Material of Front plates at bottom Steel Thickness 7/8" Material of Lower back plate none Thickness — Greatest pitch of stays — Working pressure of plate by rules —

Diameter of tubes 3 1/2" Pitch of tubes 4 3/4" Material of tube plates Steel Thickness: Front 7/8" Back 31/32" Mean pitch of stays 9 1/2"

Pitch across wide water spaces 14 1/4" Working pressures by rules 304, 327 lbs Girders to Chamber tops: Material Iron Depth and thickness of girder at centre 10 1/2 x 2 x 7/16" Length as per rule 42" Distance apart 7 1/8" Number and pitch of Stays in each 4 x 7 7/8"

Working pressure by rules 204 lbs Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked separately _____

holes _____ 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 _____ 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 _____

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DONKEY BOILER— Description *Marine Type. See Supplementary Report*
 Made at _____ By whom made _____ When made _____ Where fixed in *Shakedown*
 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:— *As required by the Rules, also 2 Tailshafts one thrust shaft, one third crankshaft, 8 propeller blades & studs, one set of top and bottom end and journal brasses & shafts, 2 Eccentric shaft one eccentric rod and valve spindle, one pumprod, Springs for all the valves and 2 Stern bushes.*

The foregoing is a correct description,
LOBNITZ & Co., LIMITED Manufacturer.
Frederick Lobnitz

General Remarks (State quality of workmanship, opinions as to class, &c. *The engines and boilers of this vessel have been built under the conditions of special survey they have been securely fitted on board and satisfactorily tested under steam.*)

In my opinion this vessel is eligible for the record + L.M.C. 496

This vessel is fitted with an electric light installation the report on which will be forwarded as soon as it has been signed by the hull and electricians.

It is submitted that this vessel is eligible for THE RECORD.

L.M.C. 496. Elec: Light.

R.S.
 13.4.96.

Emil.
 13.4.96.

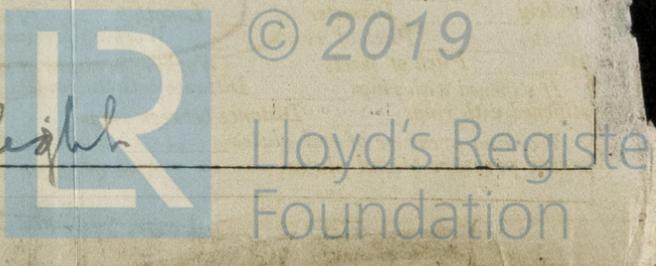
Glasgow

Certificate (if required) to be sent to _____
 The amount of Entry Fee. . . £ 3 : : :
 Special £ 35 : 13 : :
 Donkey Boiler Fee £ : : :
 Travelling Expenses (if any) £ : : :
 When applied for, 23/3/96
 When received, 24/3/96

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

Committee's Minute TUES. APL 14 1896

Assigned *+ R M C 496*



The Surveyors are requested not to write on or below the space for Committee's Minute.