

REPORT ON MACHINERY.

No. 34543.

WED. NOV. - 4. 1914

Received at London Office

Date of writing Report 19 When handed in at Local Office 19 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 3/3/14 Last Survey 24/10/1914
Reg. Book. on the T.S.S. "Tsushima Maru" (Number of Visits 59) Tons { Gross 6712
Net 4314

Master E. Combes Built at Port Glasgow By whom built Russell & Co When built 1914

Engines made at Glasgow By whom made D. Rowan & Co (6/9/20.) when made 1914

Boilers made at Glasgow By whom made D. Rowan & Co (6/9/20.) when made 1914

Registered Horse Power Owners Nippon Yusen Kabushiki Kaisha Port belonging to Tokio

Nom. Horse Power as per Section 28 619 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Twin Screw Triple Expansion No. of Cylinders 6 No. of Cranks 6

Dia. of Cylinders 20" 33 1/2" 36" Length of Stroke 48" Revs. per minute 120 Dia. of Screw shaft as per rule 12 1/2" Material of screw shaft Steel
as fitted 13 3/8"

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 length 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 yes Length of stern bush 4'-6"

Dia. of Tunnel shaft as per rule 11 1/2" Dia. of Crank shaft journals as per rule 12 1/2" Dia. of Crank pin 12 1/2" Size of Crank webs 8" Dia. of thrust shaft under
collars 12 1/2" Dia. of screw 16-6 Pitch of Screw 17'-6" No. of Blades 4 State whether moveable yes Total surface 728 sq. ft.

No. of Feed pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work yes

No. of Bilge pumps 4 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work yes

No. of Donkey Engines 3 Sizes of Pumps 9" x 6" x 10", 8" x 5" x 8", 9" x 12" No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room (4) 3 1/2" In Holds, &c. (2) in each hold 3 1/2", and (1) 2 1/2"

No. of Bilge Injections 2 sizes 8" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room of 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 & below

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 port 180 Bilge & Ballast How are they protected wood casing

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 _____ of Stern Tube _____ Screw shaft and Propeller _____

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 Amos Dunlop & Co Ltd. & The Lancashire Steel Co Ltd.

Total Heating Surface of Boilers 8892 Is Forced Draft fitted yes No. and Description of Boilers 4 Single ended

Working Pressure 200 Tested by hydraulic pressure to 400 Date of test 18/8/14 No. of Certificate 12843

Can each boiler be worked separately yes Area of fire grate in each boiler 54 1/4 sq. ft. No. and Description of Safety Valves to
each boiler 1 pair direct spring Area of each valve 8.29 sq. in. Pressure to which they are adjusted 205 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork about 2'-0" Mean dia. of boilers 14.3 Length 11.6 Material of shell plates Steel

Thickness 1 3/16" Range of tensile strength 28 to 32 tons Are the shell plates welded or flanged welded Descrip. of riveting: cir. seams lap double

long. seams butt table Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 9 3/4" Lap of plates or width of butt straps 22"

Per centages of strength of longitudinal joint rivets 93.5 Working pressure of shell by rules 227 Size of manhole in shell 16" x 12"

Size of compensating ring 2'-8" x 3'-0" x 1 1/2" No. and Description of Furnaces in each boiler 3 end flange Material Steel Outside diameter 3'-9 3/32"

Length of plain part top _____ bottom _____ Thickness of plates crown _____ bottom _____ Description of longitudinal joint welded No. of strengthening rings _____

Working pressure of furnace by the rules 207 Combustion chamber plates: Material Steel Thickness: Sides 3/4" Back 3/4" Top 3/4" Bottom 3/4"

Pitch of stays to ditto: Sides 9 3/4" x 8 1/2" Back 9 3/4" x 9 3/4" Top 11 1/2" x 8 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 200 End plates in steam space: _____

Material of stays Steel Diameter at smallest part 2.07" Area supported by each stay 93.5 sq. in. Working pressure by rules 200 Material of stays Steel

Material Steel Thickness 1 3/32" Pitch of stays 9 3/4" x 19 1/4" How are stays secured 22 nuts Working pressure by rules 200 Material of Front plates at bottom Steel

Diameter at smallest part 9.62" Area supported by each stay 410 Working pressure by rules 211 Material of Front plates at bottom Steel

Thickness 10/16" Material of Lower back plate Steel Thickness 7/8" Greatest pitch of stays 13 1/4" Working pressure of plate by rules 200

Diameter of tubes 3" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates Steel Thickness: Front 15/16" Back 13/16" Mean pitch of stays 10 1/2"

Pitch across wide water spaces 13 3/4" Working pressures by rules 202 x 217 Girders to Chamber tops: Material Steel Depth and
thickness of girder at centre 9 3/4" x 1 1/2" double Length as per rule 32 1/2" Distance apart 11 1/2" Number and pitch of stays in each (3) 8 1/2"

Working pressure by rules 207 Superheater or Steam chest; how connected to boiler none 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 yes 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 _____

