

REPORT ON MACHINERY.

No. 1095

Received at London Office

Date of writing Report 27th Nov. 1916 When handed in at Local Office 27th Nov. 1916 Port of NAGASAKI. THU. 28 DEC. 1916No. in Survey held at NAGASAKI. Date, First Survey 26th Dec. 1915 Last Survey 25th Nov. 1916
Reg. Book. on the Guard turbine s.s. "Lovli" ex "Yone Maru" (Number of Visits 914. Gross 7212Master R. Holm Built at Nagasaki By whom built Mitsubishi Dockyard & Engine Works when made 1916
254 Tons Net 5398

Engines made at Nagasaki By whom made Mitsubishi Dockyard & Engine Works when made 1916

Boilers made at Nagasaki By whom made Mitsubishi Dockyard & Engine Works when made 1916

Registered Horse Power 3500. Owners Willy C. Gilbert Port belonging to Bergen

Nom. Horse Power as per Section 28 (587) Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Parson's Sealed Steam Turbine No. of Cylinders 2 No. of Cranks 2

Dia. of Cylinders See next page Length of Stroke 14" Revs. per minute 1772 Dia. of Screw shaft 15.2" Material of screw shaft 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 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 If two

liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 5' 10"

Dia. of Tunnel shaft 14" Dia. of Crank shaft journals 7" Dia. of Crank pin 15" Dia. of thrust shaft under

collars 15" Dia. of screw 18" Pitch of Screw 16' 3" No. of Blades 4 State whether moveable Yes Total surface 107.6 sq. ft.

No. of Feed pumps 2 Diameter of ditto 4" Stroke 21" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4" Stroke 12" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 1 Sizes of Pumps 6" x 6" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 3 @ 3" In Holds, &c. No. 1 hold 2 @ 3" No. 2 hold 2 @ 4" No. 3 hold

2 @ 3" No. 4 hold 2 @ 3" No. 5 hold 2 @ 4" Cross Bunker 2 @ 3" Deep tank 2 @ 3" Tunnel well 1 @ 3"

No. of Bilge Injections 1 sizes 10" Connected to condenser, or to circulating pump Pump Is a separate Donkey Suction fitted in Engine room & size 1 @ 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 Bilge pipes How are they protected With steel plates

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

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Bridge deck

BOILERS, &c.—(Letter for record S) Manufacturers of Steel David Colville & Sons Ltd.

Total Heating Surface of Boilers 6571.3 Is Forced Draft fitted Yes No. and Description of Boilers 3 Cylindrical, Single ended.

Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 21st Aug. 1916 No. of Certificate 69

Can each boiler be worked separately Yes Area of fire grate in each boiler 54.32 sq. ft. No. and Description of Safety Valves to

each boiler 2 Spring loaded Area of each valve 9.62 sq. in. Pressure to which they are adjusted 203 lbs. Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 14' 0" Length 11' 6" Material of shell plates Steel

Thickness 1/2" Range of tensile strength 28 to 32 tons Are the shell plates welded or flanged No. Descrip. of riveting: cir. seams Double lap

long. seams 2 Straps Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 7 1/2" x 4 1/2" Lap of plates or width of butt straps 20 3/4"

Per centages of strength of longitudinal joint rivets 88.6 Working pressure of shell by rules 212 lbs. Size of manhole in shell 16" x 12"

Size of compensating ring 37" x 33" x 1 1/2" No. and Description of Furnaces in each boiler 3 Morrison Material Steel Outside diameter 31' 9 1/4"

Length of plain part top Thickness of plates crown 9" Description of longitudinal joint Welded No. of strengthening rings

bottom Thickness of plates bottom 16" Working pressure of furnace by the rules 217 lbs. Combustion chamber plates: Material Steel Thickness: Sides 3/4" Back 3/4" Top 3/4" Bottom 1 1/2"

Pitch of stays to ditto: Sides 11 1/4" x 7 1/2" Back 9" x 10 3/8" Top 7" x 11 1/2" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 222 lbs.

Material of stays Steel Area at smallest part 2.02 sq. in. Area supported by each stay 81.6 sq. in. Working pressure by rules 222 lbs. End plates in steam space:

Material Steel Thickness 1 1/2" Pitch of stays 18" x 20" How are stays secured Double nuts and washers Working pressure by rules 214 lbs. Material of stays Steel

Area at smallest part 7.67 sq. in. Area supported by each stay 3.60 sq. in. Working pressure by rules 221 lbs. Material of Front plates at bottom Steel

Thickness 3/2" Material of Lower back plate Steel Thickness 3/2" Greatest pitch of stays 13 3/4" Working pressure of plate by rules 222 lbs.

Diameter of tubes 3 1/4" Pitch of tubes 4 3/8" x 4 1/2" Material of tube plates Steel Thickness: Front 3/2" Back 2 7/8" Mean pitch of stays 11 1/3"

Pitch across wide water spaces 13 3/4" Working pressures by rules 216 lbs. Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 10 1/2" x 7 1/2" Length as per rule 31.9" Distance apart 11 1/2" Number and pitch of stays in each 3 @ 7"

Working pressure by rules 214 lbs. Steam dome: description of joint to shell % of strength of joint

Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. Type Esaki's Patent Date of Approval of Plan 18/5/15 & 15/7/15 Tested by Hydraulic Pressure to 1000 lbs.

Date of Test 5th Sept. 1916 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes

Diameter of Safety Valve 2" Pressure to which each is adjusted 205 lbs. Is Easing Gear fitted No.

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