

# REPORT ON MACHINERY.

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Port of Copenhagen

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Reg. Book.

(Number of Visits 47)

Inspection on the Steel Steamer "St. Jan"

Master R. V. C. Rambusch Built at Copenhagen By whom built J. S. Burmeister & Wainshaskins & Selsbygger Tons { Gross 2478 Net 1597 When built 1907

Engines made at Copenhagen By whom made J. S. Burmeister & Wainshaskins & Selsbygger when made 1907

Boilers made at Copenhagen By whom made J. S. Burmeister & Wainshaskins & Selsbygger when made 1907

Registered Horse Power 281 Owners Det Ostasiatiske Kompagni Port belonging to Copenhagen

Nom. Horse Power as per Section 28 281 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Inverted Triple Expansion Surf. cond. No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 21 1/2, 34 1/2, 60 Length of Stroke 39 Revs. per minute 80 Dia. of Screw shaft as per rule 1 1/2, 1 3/4 Material of S.M. Steel as fitted 1 1/2 screw shaft

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 yes

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 yes

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive yes If two no

liners are fitted, is the shaft lapped or protected between the liners no Length of stern bush 5'-0"

Dia. of Tunnel shaft as per rule 1 1/2, 1 3/4 Dia. of Crank shaft journals as per rule 1 1/2, 1 3/4 Dia. of Crank pin 1 1/2 Size of Crank webs 8 x 15 3/4 Dia. of thrust shaft under 1 1/2 collars 1 1/2 Dia. of screw 1 5/8 Pitch of Screw 15'-0" No. of Blades 4 State whether moceable no Total surface 65 sq. feet

No. of Feed pumps 2 Diameter of ditto 4" Stroke 19 1/2" Can one be overhauled while the other is at work yes One 15 tons steam engine

No. of Bilge pumps 2 Diameter of ditto 4" Stroke 19 1/2" Can one be overhauled while the other is at work yes One Sentinel feed water cleaner

No. of Donkey Engines 1 Feed Donkey 1 Sizes of Pumps 6 1/2 x 4 x 10" No. and size of Suctions connected to both Bilge and Donkey pumps 1

in Engine Room 2 off 3" dia. - 2 off 2 3/4" dia., one in dry well Holds, &c. - 1 hold 2 off 2 3/4" No. 2 hold 2 off 2 3/4" No. 3 hold 2 off 2 3/4"

Funnel well 1 off 3" Suctions, main pipes 4 1/2" & 3 1/2" in D. B. tanks 3" & 2 1/2" F. P. T. 3 A. P. T. 2 1/2"

No. of Bilge Injections one sizes 6" Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes 6"

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 sluices, except blow off cocks from boilers

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 suction pipes to fore hold How are they protected by the ceiling, pipes fitted in gutters

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 8/2. 07 of Stern Tube 11/2. 07 Screw shaft and Propeller 14/2. 07

Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from upper deck

OILERS, &c.—(Letter for record no) Manufacturers of Steel David B. Voiles & Sons, Furnaces from Thyssen, St. Hillheim

Total Heating Surface of Boilers 48,400 sq. ft. Is Forced Draft fitted no No. and Description of Boilers 2 single ended hor. return tubular

Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs. Date of test 5th Feb. 07 No. of Certificate 261 & 262

Can each boiler be worked separately yes Area of fire grate in each boiler 63.25 sq. ft. No. and Description of Safety Valves to 2 each boiler 2 Spring loaded Area of each valve 11 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 11" Mean dia. of boilers 15'-6" Length 10'-7" Material of shell plates S.M. Steel

Thickness 1 5/16" Range of tensile strength 27-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double riv.

long. seams triple riveted Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 9 1/2" Lap of plates or width of butt straps 20 5/8"

Per centages of strength of longitudinal joint rivets 88.6% Working pressure of shell by rules 182.4 lbs. Size of manhole in shell 12" x 16" plate 85.5%

Size of compensating ring 3'-6 1/8" x 2'-7 1/2" No. and Description of Furnaces in each boiler Three hoisons Material S.M. Steel Outside diameter 4'-0"

Length of plain part top 1'-0" Thickness of plates bottom 9/16" x 3/4" Description of longitudinal joint welded No. of strengthening rings 1

Working pressure of furnace by the rules 187 lbs. Combustion chamber plates: Material S.M. Steel Thickness: Sides 9/16" x 3/2" Back 5/8" Top 9/16" x 3/2" Bottom 3/4"

Pitch of stays to ditto: Sides 7 1/2" x 8" Back 7 1/4" x 7 3/4" Top 7 1/2" x 8" If stays are fitted with nuts or riveted heads nuts in outside in Working pressure by rules Sides 202.5 lbs. Back 240.1 lbs.

Material of stays Span Diameter at smallest part 5 1/8" Area supported by each stay Sides 60 sq. in. Back 56 sq. in. Working pressure by rules 224 lbs. End plates in steam space: heads remain on side

Material S.M. Steel Thickness 1" Pitch of stays 16" x 16" How are stays secured double nuts Working pressure by rules 185 lbs. Material of stays S.M. Steel

Diameter at smallest part 2.634" Area supported by each stay 256 sq. in. Working pressure by rules 213 lbs. Material of Front plates at bottom S.M. Steel

Thickness 3/16" x 1/2" Material of Lower back plate S.M. Steel Thickness 1 3/16" Greatest pitch of stays 7 3/4" x 13" Working pressure of plate by rules 199.3 lbs.

Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" + 4 1/2" Material of tube plates S.M. Steel Thickness: Front 1" Back 1 3/16" + 1 3/2" Mean pitch of stays 11 1/4"

Pitch across wide water spaces 14" Working pressures by rules 183 lbs. Girders to Chamber tops: Material S.M. Steel Depth and 1 1/2"

thickness of girder at centre 8 3/4" x 7 1/4" x 2" Length as per rule 2'-8" Distance apart 8" Number and pitch of stays in each 3 off, 7 1/2" pitch

Working pressure by rules 182 lbs. Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked no

separately 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

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

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