

REPORT ON MACHINERY.

No. 1943

SAT. OCT. 26 1912

Port of

PHILADELPHIA.

Received at London Office

No. in Survey held at Camden N.J. U.S.A. Date, first Survey 30-12-1911 Last Survey Oct. 4th 1912
 Reg. Book. 173 on the S.S. RAYO (Number of Visits 47)

Master F. Feylon Built at Camden By whom built New York Shipbuilding Co. Tons { Gross 3663.78
 Net 2223.00

Engines made at Camden By whom made New York Shipbuilding Co. When built 1912-10

Boilers made at Camden By whom made do do do when made 1912-10

Registered Horse Power 318 Owners Standard Oil Co. Port belonging to New York

om. Horse Power as per Section 28 318 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

GINES, &c.—Description of Engines Triple No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 21"-35"-58" Length of Stroke 42" Revs. per minute 80 Dia. of Screw shaft 13.00" as per rule 12.4" Material of 0.4 steel
 as fitted 12.62" screw shaft

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 soldered

the propeller boss yes If the liner is in more than one length are the joints burned no If the liner does not fit tightly at the part fitted close

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive yes If two yes

liners are fitted, is the shaft lapped or protected between the liners yes Length of stern bush 5'-1"

Dia. of Tunnel shaft 11.24" as per rule 11.75" Dia. of Crank shaft journals 11.80" as per rule 12.0" Dia. of Crank pin 2" Size of Crank webs 25.84" Dia. of thrust shaft under 12"

lars 12" Dia. of screw 15.0" Pitch of Screw 15.0" No. of Blades 4 State whether moveable yes Total surface 60 sq ft

No. of Feed pumps 2 Diameter of ditto see note on the side Stroke 20" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 20" Can one be overhauled while the other is at work yes

No. of Donkey Engines 5 Sizes of Pumps Duplex 6x4x16, 7x2x5, 10, 16x10, 14, 12x8, 12 No. and size of Suctions connected to both Bilge and Donkey pumps 16x12x18"

Engine Room 6.3 1/2' In Holds, &c. A. Peak 1-3", F. Hold 2-6", F.P. 1-4"

Pump room two 3 1/2' Two duplex cargo pumps 16x12x18"

No. of Bilge Injections 1 sizes 8" Connected to condenser, or to circulating pump yes 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 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

Are the pipes carried through the bunkers none How are they protected yes

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 22.5.12 of Stern Tube 22.5.12 Screw shaft and Propeller 10.6.12

Is the Screw Shaft Tunnel watertight no tunnel Is it fitted with a watertight door worked from

MILERS, &c.—(Letter for record 7) Manufacturers of Steel North Bros. Coatesville Pa. Approved 59/11

Total Heating Surface of Boilers 5762 sq ft Is Forced Draft fitted no No. and Description of Boilers 2 Mult-Tuple ended

Working Pressure 200 lbs Tested by hydraulic pressure to 300 lbs Date of test 29.4.12 No. of Certificate 32

Can each boiler be worked separately yes Area of fire grate in each boiler 80 sq ft No. and Description of Safety Valves to yes

Each boiler 2 direct spring Area of each valve 8.29 sq in Pressure to which they are adjusted 200 lbs Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers on woodwork 18" Mean dia. of boilers 16-1 1/2" Length 11-6" Material of shell plates steel

Thickness 1 1/2" Range of tensile strength 29, 32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams Lap D.R.

g. seams D.R.S. T.R. Diameter of rivet holes in long. seams 1 7/16" Pitch of rivets 9 3/4" Lap of plates or width of butt straps 22 3/4"

Percentages of strength of longitudinal joint 89.8 Working pressure of shell by rules 209 lbs Size of manhole in shell 16x12"

Size of compensating ring 36 1/2 x 32 1/2 x 1 1/2 No. and Description of Furnaces in each boiler 4 Morrison Material steel Outside diameter 44 3/16"

Length of plain part top 4 1/2" Thickness of plates bottom 32 Description of longitudinal joint welded No. of strengthening rings yes

Working pressure of furnace by the rules 213 lbs Combustion chamber plates: Material steel Thickness: Sides 5" Back 5" Top 5" Bottom 5 1/4"

Pitch of stays to ditto: Sides 7x6 1/2" Back 7x6 1/2" Top 7x7 1/2" If stays are fitted with nuts or riveted heads nut Working pressure by rules 247 lbs

Material of stays iron Diameter at smallest part 1 1/8" Area supported by each stay 54.25 sq in Working pressure by rules 250 lbs End plates in steam space: area

Material steel Thickness 1 1/8" Pitch of stays 16 1/2 x 15 1/4" How are stays secured D.N.T.W. Working pressure by rules 231 lbs Material of stays steel

Diameter at smallest part 2 3/8" Area supported by each stay 251 sq in Working pressure by rules 259 lbs Material of Front plates at bottom steel

Thickness 3/4" Material of Lower back plate steel Thickness 5/16" Greatest pitch of stays 14 1/2" Working pressure of plate by rules 364 lbs

Diameter of tubes 3" Pitch of tubes 4x4 1/2" Material of tube plates steel Thickness: Front 3/4" Back 3/4" Mean pitch of stays 8x8 1/2"

Pitch across wide water spaces 14 dbl Working pressures by rules 231 lbs Girders to Chamber tops: Material steel Depth and yes

Thickness of girder at centre 9x2" Length as per rule 35" Distance apart 7 1/2" Number and pitch of stays in each 4-7"

Working pressure by rules 252 lbs Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked yes

separately no Diameter no Length no Thickness of shell plates no Material no Description of longitudinal joint no Diam. of rivet no

plates no Pitch of rivets no Working pressure of shell by rules no Diameter of flue no Material of flue plates no Thickness no

stiffened with rings no Distance between rings no Working pressure by rules no End plates: Thickness no How stayed no

Working pressure of end plates no Area of safety valves to superheater no Are they fitted with easing gear no

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