

REPORT ON MACHINERY

No. 3728

REC'D NEW YORK April 5 1920

Date of writing Report Mar 20th 1920 When handed in at Local Office March 20th 1920 Port of Philadelphia
 No. in Survey held at Philadelphia Date, First Survey Mar 20th 1920 Last Survey March 19th 1920
 on the New Steel S.S. Ethan Allen
 Master W. J. Berg (1905) Built at Gloucester By whom built Rusey & Jones Bay (C 15) Tons Gross 8294.66 Net 5289.43
 Engines made at Philadelphia By whom made The New Bramp. & E. Bld Coy When built 1920-3
 Boilers made at Gloucester Pa By whom made San Shipbuilding Company when made 1920
 Registered Horse Power _____ Owners Emergency Fleet Corporation, U.S. Shipping Bd. Port belonging to Gloucester City
 Nom. Horse Power as per Section 28 643 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Quadruple Expansion No. of Cylinders 4 No. of Cranks 4
 Dia. of Cylinders 25 1/2" x 37" x 52 1/2" x 46" Length of Stroke 54" Revs. per minute 115 Dia. of Screw shaft as per rule 15.5 Material of screw shaft Iron
 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 yes 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 5' 6 1/2"
 Dia. of Tunnel shaft as per rule 14.75 Dia. of Crank shaft journals as per rule 14.94 Dia. of Crank pin 15 1/2" Size of Crank webs 10 1/2" x 2 1/2" Dia. of thrust shaft under collars 15 1/2" Dia. of screw 18.0" Pitch of Screw 18.0" No. of Blades 4 State whether moveable yes Total surface 102
 No. of Feed pumps 2 Diameter of ditto 8" Stroke 9 1/2" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 3 1/2" Can one be overhauled while the other is at work yes
 No. of Donkey Engines 2 Sizes of Pumps 10 x 12 1/2" & 10 x 12 1/2" No. and size of Suctions connected to both Bilge and Donkey pumps 2 @ 3 1/2" dia in each hold
 In Engine Room 4 @ 3 1/2" dia & one special bilge 3 1/2" dia In Holds, &c. 2 @ 3 1/2" dia in each hold
 No. of Bilge Injections 1 sizes 10" Connected to condenser, or to circulating pump C.P. 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 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 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 held a double bottom suction How are they protected 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
 Dates of examination of completion of fitting of Sea Connections 24-12-19 of Stern Tube 24-12-19 Screw shaft and Propeller 24-0-19
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top platform

OILERS, &c.—(Letter for record 17) Manufacturers of Steel Lidman Steel & Iron Co
 Total Heating Surface of Boilers 9195.5 Forced Draft fitted yes No. and Description of Boilers 3 S. & Scotch
 Working Pressure 220 Tested by hydraulic pressure to 350 Date of test 13-2-20 No. of Certificate 419
 Can each boiler be worked separately yes Area of fire grate in each boiler 65.6 No. and Description of Safety Valves to each boiler 3 1/2" Twin Area of each valve 9.6 Pressure to which they are adjusted 220 Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and branches 11'-0" Mean dia. of boilers 15.10" Length 11.11/4 Material of shell plates Steel
 Thickness 1 1/4" Range of tensile strength 60000 to 70000 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams DR
 g. seams TRDBS Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 9 1/16" Lap of plates or width of butt straps 25%
 Percentages of strength of longitudinal joint rivets 95.5% Working pressure of shell by rules 236 Size of manhole in shell 12 x 16"
 Kind of compensating ring Flanged No. and Description of Furnaces in each boiler 3 Morrison Material Steel Outside diameter 53 1/2"
 Length of plain part top 23 Thickness of plates bottom 23/32 Description of longitudinal joint Weld No. of strengthening rings 1
 Working pressure of furnace by the rules 229 Combustion chamber plates: Material Steel Thickness: Sides 1/16" Back 3/16" Top 1/16" Bottom 1 1/16"
 No. of stays to ditto: Sides 6 1/2" x 8 1/2" Back 8 x 8" Top 8 1/2" x 8 1/2" Are stays fitted with nuts or riveted heads both Working pressure by rules 220
 Material of stays W 1 Diameter at smallest part 1.997" Area supported by each stay 65 Working pressure by rules 220 End plates in steam space: Material Steel Thickness 1 1/16" Pitch of stays 6 7/8" x 16" How are stays secured Double nuts Working pressure by rules 233 Material of stays (W 1) steel
 Diameter at smallest part 3" Area supported by each stay 270 Working pressure by rules 242 Material of Front plates at bottom Steel
 Thickness 1 1/32" Material of Lower back plate Steel Thickness 1 1/16" Greatest pitch of stays 13" Working pressure of plate by rules 252
 Diameter of tubes 2 1/2" Pitch of tubes 3 1/4" x 3 1/2" Material of tube plates Steel Thickness: Front 1/32" Back 2 1/32" Mean pitch of stays 10 1/2" x 9 1/2"
 Spacing across wide water spaces 13" Working pressures by rules 225 Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 11" x 2" Length as per rule 40 Distance apart 8 1/2" Number and pitch of stays in each 4 @ 8 1/2"
 Working pressure by rules 265 Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked yes
 Diameter 11" Length 40" Thickness of shell plates 1 1/16" Material Steel Description of longitudinal joint Weld Diam. of rivet 1 1/16"
 Pitch of rivets 9 1/16" Working pressure of shell by rules 236 Diameter of flue 11" Material of flue plates Steel Thickness 1 1/16"
 Stays fitted with rings yes Distance between rings 13" Working pressure by rules 225 End plates: Thickness 1 1/16" How stayed Weld
 Working pressure of end plates 225 Area of safety valves to superheater 65 Are they fitted with easing gear yes

