

REC'D NEW YORK NOV - 8 1920

Rpt. 4.

REPORT ON MACHINERY.

No. 259
MON. NOV. 29 1920

Date of writing Report 14/9/20 When handed in at Local Office 14/9/20 Port of Cleveland Ohio
No. in Survey held at Cleveland Ohio Date, First Survey 24/12/19 Last Survey 10/10/1920
Reg. Book. on the 1/2 SENECA (S.N. 495. ENGINE NO. 495. BOILERS NO. 495) (Number of Visits 40)
Master Built at Cleveland By whom built American Shipbuilding Co Tons { Gross
Engines made at Cleveland O. By whom made American Shipbuilding Co When built 1920
Boilers made at Lorain O. By whom made American Shipbuilding Co when made 1920
Registered Horse Power 267 Owners Independent Steamship Co Port belonging to Cleveland O.
Nom. Horse Power as per Section 28 267 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple Expansion Vertical No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 21"-33"-54" Length of Stroke 40 Revs. per minute 85 Dia. of Screw shaft 11.53" Material of 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 no joints 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'-3"
Dia. of Tunnel shaft 10.38" as per rule 10.42" Dia. of Crank shaft journals 10.810.91" as per rule 11" Dia. of Crank pin 11" Size of Crank webs 21"x8 1/2" Dia. of thrust shaft under
collars 11" Dia. of screw 14'-0" Pitch of Screw 12'-5" No. of Blades 4 State whether moveable yes Total surface 64'0"
No. of Feed pumps 1 Diameter of ditto 10"x7" Stroke 14" Can one be overhauled while the other is at work yes
No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 20" Can one be overhauled while the other is at work yes
No. of Donkey Engines 2 Duplex Sizes of Pumps 7 1/2"x6"x10" No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 5'-3" Thrust & Recast + 3" Tunnel 1'-3" In Holds, &c. Forward 2'-3" after 3'-3"
Copper dams - 3"
No. of Bilge Injections 1 sizes 6" Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes - 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 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 yes
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 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
Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from Eng Room top platform

BOILERS, &c.—(Letter for record yes) Manufacturers of Steel Carnegie Steel Co.
Total Heating Surface of Boilers 3940 Is Forced Draft fitted yes No. and Description of Boilers Two cyl. multi angle ended
Working Pressure 185 lbs. Tested by hydraulic pressure to 278 lbs. Date of test 12/3/20 No. of Certificate 212
Can each boiler be worked separately yes Area of fire grate in each boiler 44 sq ft (Coal) No. and Description of Safety Valves to
each boiler Two Spring Area of each valve 7.07" Pressure to which they are adjusted 185 lbs. Are they fitted with easing gear yes
Smallest distance between boilers or uptakes and bunkers or woodwork 18 1/2" Int. dia. of boilers 13'-2" Length 10'-10 1/2" Material of shell plates Steel
Thickness 1 1/2" Range of tensile strength 60000 lbs. Are the shell plates welded or flanged no Descrip. of riveting: cir. seams R. Riv.
long. seams 285/2R. Diameter of rivet holes in long. seams 1 5/16" Pitch of rivets 9" Lap of plates or width of butt straps 12 1/2" 20 1/2"
Per centages of strength of longitudinal joint 84.9 Working pressure of shell by rules 190 lbs. Size of manhole in shell 15"x11"
Size of compensating ring 33"x33"x1 1/2" No. and Description of Furnaces in each boiler 2 Morrison Material Steel Outside diameter 52 1/4"
Length of plain part 5'8" Thickness of plates 5/8" Description of longitudinal joint Welded No. of strengthening rings yes
Working pressure of furnace by the rules 192 Combustion chamber plates: Material Steel Thickness: Sides 5/8" Back 5/8" Top 9/16" Bottom 5/8"
Pitch of stays to ditto: Sides 7 1/4"x7 1/4" Back 7 1/4"x7 1/4" Top 7 1/4"x7 1/4" If stays are fitted with nuts or riveted heads yes Working pressure by rules 188
Material of stays Iron Area at smallest part 1.72 Area supported by each stay 52.5 Working pressure by rules 196 End plates in steam space:
Material Steel Thickness 1" Pitch of stays 16 1/8"x14" How are stays secured 8 nuts Working pressure by rules 187 Material of stays Steel
Area at smallest part 4.9 Area supported by each stay 240 Working pressure by rules 212 Material of Front plates at bottom Steel
Thickness 1" Material of Lower back plate Steel Thickness 1" Greatest pitch of stays 13 3/4"x7 1/4" Working pressure of plate by rules 211
Diameter of tubes 2 1/2" Pitch of tubes 3 1/4"x3 1/4" Material of tube plates Steel Thickness: Front 1" Back 9/16" Mean pitch of stays 11 1/4"x7"
Pitch across wide water spaces 13 1/4"x7 1/4" Working pressures by rules 211 Girders to Chamber tops: Material Steel Depth and
thickness of girder at centre 9 1/2"x1 1/2" Length as per rule 32 5/8" Distance apart 7 1/4" Number and pitch of stays in each 3 @ 7 1/4"
Working pressure by rules 218 Steam dome: description of joint to shell yes % of strength of joint yes
Diameter yes Thickness of shell plates yes Material yes Description of longitudinal joint yes Diam. of rivet holes yes
Pitch of rivets yes Working pressure of shell by rules yes Crown plates yes Thickness yes How stayed yes
SUPERHEATER. Type 40865 Date of Approval of Plan 21 Feb 1920 Tested by Hydraulic Pressure to 2520
Date of Test 1 1/2" Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler yes
Diameter of Safety Valve 1 1/2" Pressure to which each is adjusted 190 lbs. Is Easing Gear fitted yes

1010-8601M

Is a Report also sent on the Hull of the Ship? If not, state whether, and when, one will be sent?

Capacity:
Tons:
6.6
9.0

9

Lloyd's Register
Foundation

IS A DONKEY BOILER FITTED? *No.*

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:—

Two top end bolts & nuts. Two bottom end bolts & nuts. Two main bearing bolts & nuts. Set of Coupling bolts & nuts. Set of Springs for H.P. I.P. & L.P. pistons. Set of valves for Air Feed & Bilge pumps. A quantity of assorted bolts & nuts. Iron of various sizes. Two spare propeller blades & studs.

The foregoing is a correct description, *5/11/20*

The American Ship Bldg. Co. Inc. Manufacturer.

Dates of Survey while building
During progress of work in shops -- *BOILERS N° 495. 1919 DEC 30. 1920 JAN. 5, 9, 13, 15, 20, 26. FEB. 2, 4, 9, 13, 17, 20, 28 MAR. 9, 12. ENGINES N° 495. 1919 DEC 24. 1920 JAN. 6, 21. FEB. 6, 12, 17. MAR. 30. APRIL 3, 19. 27, 29. MAY. 4, 8.*
During erection on board vessel -- *HULL N° 495 1920 APRIL 27, 29. MAY. 8, 20, 24, 28 JUNE 7, 11, 22. JULY 1, 8. SEP. 9. OCT. 10*
Total No. of visits *Forty.*

Is the approved plan of main boiler forwarded herewith *yes.*

Dates of Examination of principal parts—Cylinders *3/4/20* Slides *24/4/20* Covers *19/4/20* Pistons *3/4/20* Rods *3/4/20*
Connecting rods *3/4/20* Crank shaft *27/4/20* Thrust shaft *24/4/20* Tunnel shafts *22/6/20* Screw shaft *20/3/20* Propeller *22/6/20*
Stern tube *19/4/20* Steam pipes tested *27/4/20* Engine and boiler seatings *27/4/20* Engines holding down bolts *22/6/20*
Completion of pumping arrangements *8/7/20* Boilers fixed *22/6/20* Engines tried under steam *8/7/20*
Completion of fitting sea connections *29/4/20* Stern tube *8/5/20* Screw shaft and propeller *9/9/20*
Main boiler safety valves adjusted *22/10/20* Thickness of adjusting washers *Lock nuts fitted*
Material of Crank shaft *Steel* Identification Mark on Do. *440405* Material of Thrust shaft *Steel* Identification Mark on Do. *28/1/20*
Material of Tunnel shafts *Steel* Identification Marks on Do. *440405* Material of Screw shafts *Steel* Identification Marks on Do. *15/1/20*
Material of Steam Pipes *Steel (extra heavy lap welded)* Test pressure *555 lbs.*

Is an installation fitted for burning oil fuel *yes.*

Is the flash point of the oil to be used over 150°F. *yes.*

Have the requirements of Section 49 of the Rules been complied with *yes.*

Is this machinery duplicate of a previous case *yes.* If so, state name of vessel *"ROMAGNE" (N° 494).*

General Remarks (State quality of workmanship, opinions as to class, &c.)

The above Engines & Boilers have been constructed under Special Survey. The material & workmanship employed therein, so far as can be seen, are sound & good. The Engines & Boilers have been satisfactorily installed in the vessel & damaged under full steam. The safety valves have been adjusted to release at 185 lbs. press. on the boilers, & 190 lbs. press. on the Superheaters.

A 7½" x 6" x 10" Transfer pump is fitted in the Stokchold. The double bottom piping is so arranged that the Ballast pump can be made to work on any of the oil tanks; or the Transfer pump on any of the water tanks, with the exception of N° 3 fresh water tank.

This vessel is eligible, in my opinion, to have the Record of L.M.C. 9-20 with the notation of "Fitted for oil fuel 9-20 F.P. above 150°F." in the Register Book.

The amount of Entry Fee ... *£ 10 : 00* : When applied for, *4/10/20.*
Special ... *£ 166 : 45* :
Donkey Boiler Fee ... *£ 45 : 00* :
Travelling Expenses (if any) *£ - : -* : When received, *6/12/20*

G. Drummond.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned *+ L.M.C. 10.20*

MACHINERY DEPT
WRITTEN
29.11.20