

See S 701 + E Rpt. No. 3629.

REC'D NEW YORK OCT 19 1921

Rpt. 4.

REPORT ON MACHINERY.

No. 158

Received at London Office

FRI. 18 NOV. 1921

Date of writing Report 30/5/21 1921 When handed in at Local Office 30/5/21 Port of Hamilton Ohio

No. in Survey held at Hamilton Ohio Data, First Survey 17th Last Survey 24 May 1921

Reg. Book. on the ENG. No 4970. HULL No 23.

Master Built at OAKLAND By whom built Union Construction Coy Tons { Gross Net } When built

Engines made at Hamilton Ohio By whom made Hooven Owen & Rentschler Co when made 1921

Boilers made at By whom made when made

Registered Horse Power Owners Port belonging to

Nom. Horse Power as per Section 28 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

ENGINES, &c.—Description of Engines Triple Expansion Vertical No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 27"-45"-74" Length of Stroke 48" Revs. per minute 80 Dia. of Screw shaft as per rule as fitted Material of screw shaft

Is the screw shaft fitted with a continuous liner the whole length of the stern tube Is the after end of the liner made water tight in the propeller boss 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

Dia. of Tunnel shaft as per rule 13-3" as fitted 13-39" Dia. of Crank shaft journals as per rule 14" 14-06" as fitted 14 1/2" Dia. of Crank pin 14 1/2" Length of stern bush 27 1/2 x 29" Dia. of thrust shaft under collars Dia. of screw Pitch of Screw No. of Blades State whether moveable Total surface

No. of Feed pumps 2 Diameter of ditto 11" Stroke 26" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 4" Stroke 26" Can one be overhauled while the other is at work yes

No. of Donkey Engines Sizes of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room In Holds, &c.

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

Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Discharge Pipes above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate

What pipes are carried through the bunkers How are they protected

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

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

BOILERS, &c.—(Letter for record) Manufacturers of Steel

Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers

Working Pressure 150# Tested by hydraulic pressure to Date of test No. of Certificate

Can each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to each boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates

Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Per centages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell plate

Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Length of plain part top Thickness of plates crown Description of longitudinal joint bottom No. of strengthening rings

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom Working pressure by rules

Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

Material of stays Area at smallest part Area supported by each stay Working pressure by rules End plates in steam space:

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

Area at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each

Working pressure by rules 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

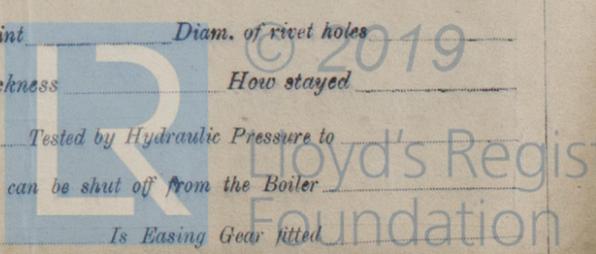
SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

W485-0235

W485-0233



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Two top end bushes with bolts + nuts. Two bottom end bushes with bolts + nuts. Two main bearing bolts + nuts. Six Crapling bolts + nuts. Set of valves for Air + bilge pumps. Set of springs + rings for H.P. I.P. + L.P. pistons. Valve stem, link block brasses, & eccentric strap complete. Air pump rod. Bilge pump plunger. Guide shoe. 1/3 length crank shaft. Follows studs + nuts for pistons, + studs + nuts for stuffing box.

The foregoing is a correct description,

Hood & Barn Reuschler Co
of New York

Manufacturer.

Dates of Survey while building: During progress of work in shops - - - 1921 March 17, April 4, 19, 27, May 12, 24
 During erection on board vessel - - -
 Total No. of visits

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts: Cylinders 27/4/21 Slides 19/4/21 Covers 4/1/21 Pistons 19/4/21 Rods 19/4/21
 Connecting rods 25/5/21 Crank shaft 24/5/21 Thrust shaft 19/4/21 Tunnel shafts 24/5/21 Screw shaft 24/5/21 Propeller 24/5/21
 Stern tube _____ Steam pipes tested _____ Engine and boiler seatings _____ Engines holding down bolts _____
 Completion of pumping arrangements _____ Boilers fixed _____ Engines tried under steam _____
 Completion of fitting sea connections _____ Stern tube _____ Screw shaft and propeller _____
 Main boiler safety valves adjusted _____ Thickness of adjusting washers _____
 Material of Crank shaft Steel Identification Mark on Do. LLOYD Material of Thrust shaft Steel Identification Mark on Do. LLOYD
 Material of Tunnel shafts _____ Identification Marks on Do. _____ Material of Screw shafts _____ Identification Marks on Do. _____
 Material of Steam Pipes _____ Test pressure _____

Is an installation fitted for burning oil fuel _____ Is the flash point of the oil to be used over 150°F. _____

Have the requirements of Section 49 of the Rules been complied with _____

Is this machinery duplicate of a previous case _____ If so, state name of vessel _____

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

The above Engines have been built under Special Survey. The workmanship & materials used in their construction, so far as can be seen, are sound & efficient. When they have been satisfactorily installed in the vessel, proved satisfactory under working conditions & spare gear supplied as required by the Rules, this vessel will be eligible in my opinion for Record in L.M.C. (with date)

See Lloy Mach. 1st E.
 Rpt. No. 3629.

The amount of Entry Fee ...	When applied for,
Special	19
Donkey Boiler Fee ...	When received,
Travelling Expenses (if any) ...	19

B. Hammond

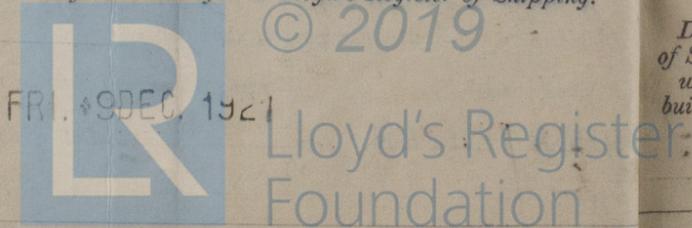
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

New York NOV - 1 1921

Assigned

See S. 70. 3629



The Surveyors are requested not to write on or below the space for Committee's Minute.