

REC'D NEW YORK OCT 17 1921

See S to 1st E. Rpt. No. 3728.

Rpt. 4.

REPORT ON MACHINERY.

No. 159

FRI. 18 NOV. 1921

Received at London Office

Date of writing Report 12/7/21 When handed in at Local Office 10

Port of Cleveland Ohio

No. in Survey held at Hamilton Ohio

Date, First Survey April 4/21 Last Survey July 6 1921

Reg. Book.

on the ENG N^o 4971 HULL N^o

(Number of Visits 7

Tons } Gross
 } Net

Master

Built at San Pedro By whom built Southwestern Oil Co. When built

Engines made at Hamilton Ohio

By whom made Hoover Owens & 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

Length of stern bush

Dia. of Tunnel shaft as per rule 12-3" Dia. of Crank shaft journals as per rule 14" Dia. of Crank pin 14 1/2" Size of Crank webs 27 1/2" x 29" Dia. of thrust shaft under collars as fitted 14 1/2"

No. of Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work

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

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 180#

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

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

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

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

W1324-0075

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 coupling bolts & nuts. Set of valves for air & bilge pumps. Set of springs & rings for H.P. & L.P. pistons. Valve stem, link block brasses. Eccentric strap complete. Air pump rod. Bilge pump plunger. Guide shoe. 1/2 length crank shaft. Hollowed studs & nuts for pistons, & studs & nuts for stuffing boxes.

The foregoing is a correct description,

Heaven Open Reitschle Co
Hennigfleiter Manufacturer.

Dates of Survey while building
During progress of work in shops --
During erection on board vessel --
Total No. of visits

1921 April 4 19.27 May 13 25 June 29 July 6.

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 4/4/21 Slides 29/4/21 Covers 29/4/21 donkey " 19/4/21 " 19/4/21
Connecting rods 13/5/21 Crank shaft 25/5/21 Thrust shaft 29/4/21 Tunnel shafts 29/4/21 Pistons 29/4/21 Rods 29/4/21
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's Material of Thrust shaft Steel Identification Mark on Do. Lloyd's
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 employed 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 & L.M.C. (with date).

Certificate (if required) to be sent to

The amount of Entry Fee
Special ...
Donkey Boiler Fee ...
Travelling Expenses (if any) ...
Committee's Minute
Assigned

B. Drummond

Engineer Surveyor to Lloyd's Register of Shipping.

New York NOV 1 1921

See S.70 3627



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