

REPORT ON MACHINERY.

No. 4264

31 OCT 1927

Received at London Office

Report 14th Oct. 1927 When handed in at Local Office 14th Oct. 1927 Port of Newport News, Va.
 Survey held at Norfolk, Va. Date, First Survey 28th Sept. Last Survey 12th Oct. 1927
 (Number of Visits)

on the Steel Screw Steamer CERRO GARDO Tons Gross 2323
 Bunker Built at Duluth, Minn. By whom built McDougall Duluth Co. When built 1919
 Tons Net 1394
 Made at Duluth, Minn. By whom made McDougall, Duluth Company when made 1919
 Made at Duluth, Minn. By whom made McDougall, Duluth Company when made 1919

Horse Power Owners Hammond Lumber Company Port belonging to San Francisco
 Power as per Section 28 262 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes

S, &c.—Description of Engines Triple Expansion Surface Condensing No. of Cylinders 3 No. of Cranks 3
 Cylinders 20"-33"-54 Length of Stroke 40" Revs. per minute 85 Dia. of Screw shaft as per rule 11.64 Material of Steel
 as fitted 11 1/16 screw shaft
 Shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight
 Peller boss Yes If the liner is in more than one length are the joints burned If the liner does not fit tightly at the part
 bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive If two

fitted, is the shaft lapped or protected between the liners
 as per rule 10.49 10.34 Dia. of Crank shaft journals as per rule 11 1/2 10.65
 as fitted 10 1/2 11 1/2 Dia. of Crank pin 11 3/4 Size of Crank webs 21 x 7 1/2 Dia. of thrust shaft under
 1" Dia. of screw 14-0 Pitch of Screw 12-5 No. of Blades 4 State whether moveable No Total surface 64 sq ft

d pumps 2 Diameter of ditto 3 1/4 Stroke 20 Can one be overhauled while the other is at work Yes
 ie pumps 2 Diameter of ditto 4 1/2 Stroke 20 Can one be overhauled while the other is at work Yes
 key Engines 2 Sizes of Pumps 10 x 6 x 12 No. and size of Suctions connected to both Bilge and Donkey pumps
 7 x 9 x 7

Room 4-3 One Tunnel Well 3" In Holds, &c. Forward Hold 2-3"
 Hold 2-3"

Injections One sizes 6 Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 3"

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

Connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both

Discharge 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

Discharge 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 carried through the bunkers None How are they protected

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

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

Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Cop platform in E.R.

S, &c.—(Letter for record) (S) Manufacturers of Steel Illinois Steel Company, Chicago, Ill.

Heating Surface of Boilers 3828 Is Forced Draft fitted Yes No. and Description of Boilers 2 Single Ended

Pressure 190 lbs. Tested by hydraulic pressure to 285 lbs. Date of test No. of Certificate

Boiler be worked separately Yes Area of fire grate in each boiler 50 sq ft No. and Description of Safety Valves to

Two Spring loaded Area of each valve 7.07 sq ft Pressure to which they are adjusted 190 lbs. Are they fitted with easing gear Yes

Distance between boilers or uptakes and bunkers or woodwork about 10'-0" Mean dia. of boilers 13'-0" Length 11'-0" Material of shell plates Steel

1/4" Range of tensile strength 60,000 Are the shell plates welded or flanged No. Descrip. of riveting: cir. seams D.R. Lap

TR. DBS. Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 1/4" Lap of plates or width of butt straps 18 1/4"

Strength of longitudinal joint rivets 84.6 Working pressure of shell by rules 205 lbs. Size of manhole in shell 16" x 12"

Compensating ring 34 x 31 x 1 1/4 No. and Description of Furnaces in each boiler 2 Morrison Material Steel Outside diameter 52 1/2"

Plain part top Thickness of plates crown 5/8" Description of longitudinal joint Welded No. of strengthening rings Corrugated

Pressure of furnace by the rules 193 lbs. Combustion chamber plates: Material Steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 1 3/32"

Stays to ditto: Sides 6 x 6 3/8 Back 6 3/8 x 6 3/8 Top 6 x 7 3/8 If stays are fitted with nuts or riveted heads Riv heads Working pressure by rules 212 lbs.

Stays Steel Area at smallest part 1.27 sq ft Area supported by each stay 47.07 Working pressure by rules 222 lbs. End plates in steam space:

Steel Thickness 1 1/16" Pitch of stays 14 x 15 How are stays secured D. nuts Working pressure by rules 239 lbs. Material of stays Steel

Smallest part 4.43 Area supported by each stay 210 sq ft Working pressure by rules 282 lbs. Material of Front plates at bottom Steel

3/4" Material of Lower back plate Steel Thickness 5/16" 23 Greatest pitch of stays 13 1/2 x 6 1/16 Working pressure of plate by rules 324 lbs.

of tubes 2 1/2" Pitch of tubes 3 3/4 x 3 3/8 Material of tube plates Steel Thickness: Front 3/4" Back 1/16" Mean pitch of stays 10 3/8 x 7 1/2"

Cross wide water spaces 13 1/2" Working pressures by rules 291 lbs. Girders to Chamber tops: Material Steel Depth and

of girder at centre 8 5/8 x 1 1/2 Length as per rule 26 3/2 Distance apart 7 5/8 Number and pitch of stays in each 3-6"

Pressure by rules 229 lbs. Steam dome: description of joint to shell Not fitted % of strength of joint

Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

Rivets Working pressure of shell by rules Crown plates Thickness How stayed

HEATER. Type Not fitted Tested by Hydraulic Pressure to

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

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

IS A DONKEY BOILER FITTED?

No.

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

One C.I. Propeller. One set of top and bottom
brasses. Two top end bolts and nuts. Two bottom end bolts and nuts.
Two main bearing bolts & nuts. Piston rings for H.P. & L.P. Pistons
1 Set of Feed and Bilge Pump Valves for attached Pumps
1 Set of valves and seats for independent and auxiliary feed Pump
& Bilge Pumps. Bolts and Nuts of assorted sizes etc.

The foregoing is a correct description,

Manufacturer.

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

Sept. 28, 29. Oct. 4, 5, 6, 8, 11, & 12.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders Slides Covers Pistons Rods
Connecting rods Crank shaft Thrust shaft Tunnel shafts Screw shaft Propeller
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. Material of Thrust shaft Steel Identification Mark on Do.

Material of Tunnel shafts Steel Identification Marks on Do. Material of Screw shafts Steel Identification Marks on Do.

Material of Steam Pipes Steel tubing Test pressure

Is an installation fitted for burning oil fuel No. 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 Yes If so, state name of vessel S/S Francis Weems "Chapbell Chamblee"

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

The engines and boilers of this vessel were built under the survey of American Bureau of Shipping and the materials tested in accordance with their Rules. They are of good design and the workmanship good and efficient. The boilers have been examined internally and found in good condition. were subjected to a hydraulic test of 285 lbs per sq. in. and found tight and all boiler mountings were examined and found in good order. The scan of the boilers compared with the blue prints and found to agree.

The safety valves adjusted to blow at 190 lbs per sq. in. The main engine Auxiliary machinery, Steam steering gear and windlass engine tested under steam and found to be in good working order. Main engine & boiler fastenings examined and found efficient.

The case is respectfully submitted for the notation of L.M.C. 10 Propeller Shaft seen 10-27 in the Register Book

The amount of Entry Fee ...
Special ... \$250 -
Donkey Boiler Fee ...
Travelling Expenses (if any) ...
When applied for, 14/10/1927
When received, 10/11/27 R.B.M.

Committee's Minute NEW YORK OCT 19 1927

Assigned See form Rpt. 9 attached

For C. J. Hudson
H. G. House

Engineer Surveyor to Lloyd's Register of Shipping

FRI. 20 JAN 1928

FRI. 11 MAY 1928



Lloyd's Register Foundation