

## Report of Survey for Repairs, &amp;c., of Engines and Boilers.

(Received at London Office)

Date of writing Report 8th Nov., 19 47. When landed in at Local Office 8th Nov., 19 47 Port of Galveston, Texas  
No. in Survey held at Port Arthur, Texas Date, First Survey 13th Aug. Last Survey 8th Oct., 19 47  
No. of Visits 5  
on the Machinery of the ~~Wood Iron or Steel~~ S/S "GULFDOWN" NOW "BIG HORN"

Gross 7096 Vessel built at Chester, Pa. By whom Sun Shipbuilding & D.D. Co. When 1936  
Net 4337 Engines made at Philadelphia, Pa. By whom Westinghouse Elec. & When 1934  
Nominal 585 Boilers, when made (Main) (Donkey)  
No. of Main Boilers 2 Owners Sabine Transportation Co. Owners' Address  
No. of Donkey Boilers - (if not already recorded in Appendix to Register Book.)  
Steam Pressure 450 lbs. Managers Port Baltimore (Con-Voyage)  
in Main Boilers 440 Sph. If Surveyed Afloat or in Dry Dock Afloat  
in Donkey Boilers - (State name of Dock.)

Last Report No. Port

## Particulars of Examination and Repairs (if any) Part LMC

Periodical Surveys, when held, must be reported in detail and serially in the terms of the Rules. State clearly the cause of Repairs, if any, and, in detail, the nature and extent of Examinations and subsequent Repairs. Repairs on account of Damage (the cause of which must be stated) should be separated from Repairs due to other causes; and besides being detailed in the body of the report, should be briefly summarised at the end of the report. State also the dates and initials of any letters respecting this case.

in damage cases where the Surveyor has not made a special damage report he is required to state whether he offered his services for this purpose, and why they were declined Not Required

Was a damage report made by anyone else? If so, by whom? No Not Required

Did the Surveyor personally go inside each Main Boiler separately and make a thorough examination at this time? Yes

" " Donkey " " "

if this was not done, state for what reasons?

and what parts of the Boilers could not be thus thoroughly examined?

Also what special means, in the absence of internal examination, were adopted by the Surveyor to assure himself of the thorough efficiency of those parts of each Boiler? Also hydrostatic pressure of 675 lbs. applied

State latest date of internal examination of each boiler 12th September, 1947

Present condition of funnel(s) Good

Did the Surveyor examine the Safety Valves of the Main Boiler? Yes

To what pressure were they afterwards adjusted under steam? 450 Boiler 440 Sph.

Did the Surveyor examine the Safety Valves of Donkey Boiler? -

To what pressure were they afterwards adjusted under steam? -

Did the Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? Yes

, and of the Donkey Boilers? -

Did the Surveyor examine the drain plugs of the Main Boilers? -

, and of the Donkey Boilers? -

Did the Surveyor examine all the mountings of the Main Boilers? Yes

, and of the Donkey Boilers? -

Has screw shaft now been drawn and examined? -

Is it fitted with continuous liner? -

Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated? -

Has shaft now been changed? - If so, state reasons -

Has the shaft now fitted been previously used? -

Has it a continuous liner? -

Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated? -

State date of examination of Screw Shaft -

State the distance between lignum vitae or bearing metal of stern bush and top of after bearing of screw shaft -

Engine parts, when referred to by numbers, should be counted from forward.

Is electric light and/or power fitted? Yes

so, did the Surveyor examine the generators, motors, switchgear, cables and fuses? Yes

Has the insulation resistance of the generators, circuits and apparatus been tested and found to be not less than 100,000 ohms? Yes

If the Survey is not complete, state what arrangements have been made for its completion and what remains to be done To Complete screw shaft, propeller, stern bush, sea connections and fastenings to examine whilst the vessel was afloat.

How Done for B.S.

Examined the two main water tube boilers under hydrostatic pressure of 675 lbs. per sq. inch. afterwards opened up and examined throughout together with all mountings, doors and fastenings, all found or now placed in good order after minor repairs.

All steam pipes tested to 2 W.P. = 900 lbs., found or made tight.

All safety valves adjusted under steam as stated above.

Oil fuel system examined and under working conditions all found satisfactory.

Oil discharge pipes found in good condition, accessible, visible, well lighted and joints all tight.

(P.T.O.)

## General Observations, Opinion, and Recommendation:—

The machinery of this vessel, so far as now

(State clearly what alteration, if any, is suggested to be made in the existing classification of the vessel's machinery in the Register Book, consequent upon this survey, and also any alteration required to be made in the records of the vessel's machinery, boilers, working pressures, &c.; thus, for example, B.S. 9,11, B.G.M.S. 9,11, L.M.C. 9,11, or L.M.C. 140 lb., F.D., &c.)

CS 3,34,

been, is in good and safe working condition and is eligible in my opinion to be classed with this society with a record of L.M.C. 10,47, class contemplated, when survey has been completed, subject

to 1 spare propeller blades to supply.

Survey Fee (per Section 29) Machy. & Boilers 400.00 Fees applied for  
Special Damage or Repair Fee (if any) Elect \$ : 200.00 13/12/19 47  
(per Section 29.)

Travelling expenses (if chargeable) Phone \$ : 33.00  
Calls & Telegrams

Committee's Minute

Assigned See Mot. Rpt. No. 2315

WTB (SPT) 450 lbs.

NEW YORK DEC 30 1947

James Lindsay  
Engineer Surveyor to Lloyd's Register of Shipping.

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Done for L.M.C.

The Main H.P. and L.P. Steam turbines, thrust and intermediate shafts, pumps and condensers examined main and auxiliary condenser and evaporator tested.  
Reduction gears, shafts, shaft bearings and teeth of gears examined.  
The valves, cocks, pipes and strainers of pumping arrangements were examined and found satisfactory.

The following auxiliary machinery was opened up, examined, closed up and tested under working condition -

Fire, Bilge and General Service Pump

Size 14" x 10 $\frac{1}{2}$ " x 12"  
Suct. 6"  
Disc. 6"

Auxiliary Feed Simplex Pump

Size 10 x 6 x 24

Auxiliary Feed Simplex Pump

Size 10 x 6 x 24

Main Circulator Pump

G.P.M. 4900  
25 foot head  
RPM 900  
Suct. 13" at impeller  
Discharge 14"

Main Circulator Motor

Westinghouse  
Shunt Wound  
R.P.M. 675 - 900  
H.P. 40

Whiton Turbine Fire Pump - Port Side Aft

Speed 3500  
Back Pressure 5#  
H.P. 42

Fire Pump - Liquid End

R.P.M. 3500  
230 lbs.  
G.P.M. 400  
Suct. 4"  
Discharge 4"

Whiton Turbine Auxiliary Condenser Circulator Pump

G.P.M. 1200  
H.P. 10 (Driven)  
R.P.M. 1460 - 25 ft. T.DH.

Steam End  
250 lbs. 1450-1600 R.P.M.  
5# back pressure

Offin Feed PumpSteam Turbine Centrifugal Pump

H.P. 94 - RPM 6900  
Steam Press. 375-400#  
Head 1190 Ft.  
Capacity 125 G.P.M.  
Minimum Net Head 20 Ft.

Main Triplex Boiler Feed Pump

Westinghouse Electric  
Shunt Wound  
H.P. 25 - 230 Volts  
Amps 92  
R.P.M. 875-1850  
100% Load - 25 H.P. 40° C Raise  
Pump End - Suction 3" - Discharge 3"  
Harrison, N. J.

2 Main Condenser Condensate Pump

Forward Amidships  
Duplex - Worthington, Harrison, N. J.  
Size 7 $\frac{1}{2}$  x 6 x 10  
Suction 4"  
Discharge 2 $\frac{1}{2}$ "

Fuel Oil Service Pump No. 1 and 2

Forward Port  
No. 1 - Motor Driven  
Inboard Pump  
Motor:  
Westinghouse  
Type SK  
Shunt wound - 3 H.P.  
230 Volts - 12.5 Amps  
1150 R.P.M. 100% load  
24 house 40° C Rise  
Fuel Pump End:  
Worthington  
1 $\frac{1}{2}$  S.R.S.  
Suct. 1 $\frac{1}{2}$ "  
Disch. 1 $\frac{1}{2}$ "

Port of Galveston, Texas

Continuation of Report No. 4903

dated 8th Nov., 1947 on the

S/S "GULFDOWN"

Fuel Pump Steam Driven

Port Side Forward  
Suction 1 $\frac{1}{2}$ "  
Disch. 1 $\frac{1}{2}$ "  
(Stand-By Pump)

Electric Fuel Oil Transfer Pump

Motor End:  
Westinghouse  
5-H.P. - 230 Volts  
R.P.M. 1750  
Pump End:  
Worthington  
Size 4 - 4" Suct. - 4" Disch.

Steam Driven Transfer Pump (Boiler Room)

Worthington  
Size 10 x 6 x 10  
Suct. 4" - Disch. 4"

Lube Oil Pump

Steam driven - Port Side aft  
DeLaval Steam Turbine  
Trenton, N.J.  
B.H.P. 9 - Steam Pressure 375#  
Back Pressure 10#  
Pump Speed 850 - Capacity 240 G.P.M.  
Suct. 6" - disch. 4"

Lube Oil Pump

After Port  
H.P. 5 - V. 230  
RPM 1750 - Amps 21  
100% load - 24 Hrs.  
400 C Rise  
Suct 4" - disch. 4"  
Geared Centrifugal Pump

Main Generators

Stbd. Single Red.  
230 V - 125 KW  
Westinghouse  
Pinion Bearings 1st  
Dia. 3 $\frac{1}{2}$  x 5 $\frac{1}{2}$  long  
Generator Shaft Bearings  
5 $\frac{1}{2}$ " long - dia. 4"  
Main Gear Wheel  
Dia. 26" - Width 9 $\frac{1}{2}$ "  
Pinion dia. 5"  
Generator End Data:  
Westinghouse  
125 KW - 240 Volts  
520 Amps - 1200 R.P.M.  
Steam End:  
Starboard - Turbine No. 20391  
Port: Turbine No. 20390  
Pinion - R.P.M. 6600  
Gear - R.P.M. 1200

Aux. 120 V. Generator - 60 K.W.

Forward  
Westinghouse  
Amps. 500 - R.P.M. 1800  
Steam  
Westinghouse Turbine  
Steam pressure 200#  
H.P. 89.4 - R.P.M. 7282

Motor Driven 120 V. Generator

Generator End  
Westinghouse  
DC Generator #100L - Comp. Wound  
18 KW 125 V.  
144 Amps - 1100 R.P.M.  
Motor End  
Triumph Electric Manufacturing  
Cincinnati, Ohio  
Type FF - Volts 230  
Amps. 91 - R.P.M. 1150  
HP 25

Evaporator

Paracell  
Davis Engineering Corp.  
New York, N. Y.  
Tested 50#  
Tube Test 500

Main Propulsion Unit

Main Gears  
Westinghouse - Gear No. 2161  
Pinions R.P.M.  
H.P. 4830  
L.P. 3620



Gear R.P.M. 78

H.P. Turbine  
Westinghouse Turbine  
Turb. R.P.M. 4830

L.P. Turbine  
Westinghouse Turbine  
R.P.M. 3620

Aux. Condenser Condensate Pump  
(2" vertical)

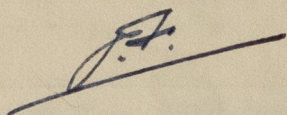
Motor End:  
Westinghouse - Type SK - HP 5  
RPM 1200 - 1750  
230 V.  
Pump End:  
Suct.  $3\frac{1}{2}$ "  
Disch. 2"  
Capacity 65 G.P.M.  
Head in Ft. 110

Note:- All piping throughout vessel is as original.

Megger tested all electric light circuits throughout vessel, copy of results enclosed.

See Mobile Report No. 2315 for docking, propeller, tail shaft, stern bush, outside fastenings sea valves and cocks.

Cert. B1 issued, copy herewith.



Note: All machinery examined and tested under working conditions and found satisfactory.

To complete Machinery Survey - Screw shaft, propeller, stern bush, sea connections and their fastenings to be examined.



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