

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 5 MAY 1947

Date of writing Report 1st April, 19 47 When handed in at Local Office 1st April, 19 47 Port of Galveston, Texas

No. in Survey held at Galveston, Texas Date, First Survey 17th Feb. Last Survey 28th February, 19 47

Reg. Book 5891 on the S/S "JAMES D. PHELAN" (Number of Visits 9)

Tons { Gross 7176 Net 4380

Built at Richmond, Cal. By whom built Permanente Metals Corp. (Shipyard Yard No. - When built 1943

Engines made at Sunnyvale, Cal. By whom made Joshua Hendy Iron Works Engine No. - When made 1943

Boilers made at California By whom made Western Pipe & Steel Co. Boiler No. 295 & 323 When made 1943

Registered Horse Power 2500 Owners Scindia Steam Navigation Co. Port belonging to Bombay

Nom. Horse Power as per Rule 634.8 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which Vessel is intended Dry and perishable cargoes

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute 76

Dia. of Cylinders 24½", 37", 70" Length of Stroke 48" No. of Cylinders Three No. of Cranks Three

Crank shaft, dia. of journals as per Rule 14.28" Crank pin dia. 14.25" Crank webs Mid. length breadth 30" Thickness parallel to axis 7.125

as fitted 14.25" Mid. length thickness 9" Thickness around eye-hole 7.125

Intermediate Shafts, diameter as per Rule 13.6" Thrust shaft, diameter at collars as per Rule 14.25

as fitted 13.5" as fitted 14.25

Tube Shafts, diameter as per Rule 15.00 Is the shaft fitted with a continuous liner Yes

as fitted 15.25

Bronze Liners, thickness in way of bushes as per Rule .757 Thickness between bushes as per Rule .567

as fitted .7812 Is the after end of the liner made watertight in the

propeller boss Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner -

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 -

two liners are fitted, is the shaft lapped or protected between the liners - Is an approved Oil Gland or other appliance fitted at the after end of the tube

Length of Bearing in Stern Bush next to and supporting propeller 5 feet

Propeller, dia 18' 6" Pitch 16' No. of Blades Four Material Bronze whether Moveable No Total Developed Surface 117 sq. ft.

ed Pumps worked from the Main Engines, No. - Diameter - Stroke - Can one be overhauled while the other is at work -

Large Pumps worked from the Main Engines, No. Two Diameter 4.5 Stroke 26" Can one be overhauled while the other is at work Yes

Feed (No. and size Two (12 x 8 x 24) Simplex Pumps connected to the Main Bilge Line (No. and size Two (10 x 11 x 12 Duplex)

How driven Steam How driven Steam

Ballast Pumps, No. and size One (10 x 11 x 12 Duplex) Lubricating Oil Pumps, including Spare Pump, No. and size -

Are two independent means arranged for circulating water through the Oil Cooler - Suctions, connected to both Main Bilge Pumps and Auxiliary

ge Pumps;—In Engine and Boiler Room 2-2½", 2-3", 2-5" in E. R.; 2-3" in B.R. In Holds, &c. Two 3" No. 1 hold, Two 3" No. 2 hold, Two 3" No. 3

Pump Room -

old, Two 3" No. 4 hold, Two 3" No. 5 hold.

Main Water Circulating Pump Direct Bilge Suctions, No. and size One 10" Independent Power Pump Direct Suctions to the Engine Room Bilges, and size 2-5" diameter Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes (Strainers in bilge wells)

the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes

All Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Valves

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

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 No

at Pipes pass through the bunkers None How are they protected -

at pipes pass through the deep tanks None Have they been tested as per Rule -

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

the arrangement of Valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another Yes Is the Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Thrust recess

AIN BOILERS, &c.— (Letter for record ) Total Heating Surface of Boilers 9704 sq. ft. + 529 = 10233

Which Boilers are fitted with Forced Draft P & S Which Boilers are fitted with Superheaters P & S

and Description of Boilers Two Water Tube B. & W. Type Working Pressure 250 lbs. (SP. 230 (1))

A REPORT ON MAIN BOILERS NOW FORWARDED? Yes

A DONKEY BOILER FITTED? No If so, is a report now forwarded? -

the donkey boiler be used for domestic purposes only -

ANS. Are approved plans forwarded herewith for Shafting Yes Main Boilers Yes Auxiliary Boilers - Donkey Boilers -

(If not state date of approval)

Superheaters Yes General Pumping Arrangements --- Oil fuel Burning Piping Arrangements ---

## SPARE GEAR.

the spare gear required by the Rules been supplied Yes

the principal additional spare gear supplied None

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

Dates of Examination of principal parts—Cylinders 20th Feb., 1947 Slides 20th Feb., 1947 Covers 20th Feb., 1947  
Pistons 20th February, 1947 Piston Rods 20th February, 1947 Connecting rods 20th February, 1947  
Crank shaft 20th & 21st Feb., 1947 Thrust shaft 20th & 21st Feb., 1947 Intermediate shafts 20th & 21st February, 1947  
Tube shaft - Screw shaft 17th February, 1947 Propeller 17th & 18th February, 1947  
Stern tube 17th February, 1947 Engine and boiler seatings - Engines holding down bolts 21st February, 1947  
Examination of Completion of fitting sea connections 17th February, 1947 examined Boilers 20th & 21st Feb. 1947 Engines tried under steam 28th February, 1947  
Completion of pumping arrangements - Thickness of adjusting washers -

Main boiler safety valves adjusted 27th February, 1947 Identification Mark - Thrust shaft material - Identification Mark -

Crank shaft material - Identification Mark - Tube shaft, material - Identification Mark -

Intermediate shafts, material - Identification Marks - Steam Pipes, material Steel Test pressure - Date of Test -

Screw shaft, material - Identification Mark - Is the flash point of the oil to be used over 150°F. Yes

Is an installation fitted for burning oil fuel Yes Have the requirements of the Rules for the use of oil as fuel been complied with Yes

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No If so, have the requirements of the Rules been complied with

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with

Is this machinery duplicate of a previous case Yes If so, state name of vessel "Liberty" EC2-S-C1

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery of this vessel has been built

installed under the supervision of the American Bureau of Shipping, and, as far as now seen, appear

to be of good and sound construction and carefully installed. On completion of Survey, the two m

boilers, the main and auxiliary machinery and the electrical installation have been examined under

working conditions and found satisfactory. Feed water regulators in accordance with Section 34,

Clause 6, Page 121 of the Rules, have now been fitted.

It is the opinion of the undersigned that the machinery of this vessel is suitable to be

classed with this Society with records of LMC 3,47 and TS (CL) seen 2,47.

The shaft tunnel of this vessel is fitted with a quick closing watertight door operated fr

the thrust recess. It has been pointed out to the Owners that to comply with the Rules, this doo

must be operable from the freeboard deck and arrangements have been made to fit a sliding W. T. d

operated from the freeboard deck at the earliest opportunity. (See Ship endorsement)

The amount of Entry Fee ... \$ \$300.00 : When applied for,  
Special ... \$ : 27/3/1947  
Donkey Boiler Fee ... \$ : When received,  
Travelling Expenses (if any) \$ : 19

NEW YORK APR 16 1947

Committee's Minute

Assigned LMC-3,47

James Lindsay  
Engineer Surveyor to Lloyd's Register of Shipping



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Foundation