

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

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Writing Report 14/9/40 When handed in at Local Office 18/9/40 Port of MANCHESTER
 Survey held at Manchester Date, First Survey 21/8/40 Last Survey 30/8/40 19
 on the S/S "EMPIRE BISON" ex "WEST CAWTHON" (Number of Visits 5)
 at San Pedro Cal. By whom built S. Western S.B. Co. Yard No. When built 1919
 made at Los Angeles By whom made Levelly Iron Works Engine No. When made 1919
 made at _____ By whom made _____ Boiler No. When made _____
 rated Horse Power _____ Owners Ministry of Shipping Port belonging to London.
 Horse Power as per Rule _____ Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted YES
 for which Vessel is intended _____

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute _____
 of Cylinders M.P. 4 1/8 Length of Stroke 48" No. of Cylinders 3 No. of Cranks 3
 shaft, dia. of journals as per Rule _____ Crank pin dia. 1 1/2" Crank webs Mid. length breadth _____ Thickness parallel to axis 9 1/2"
 as fitted 1 1/4" Mid. length thickness _____ Thickness around eye-hole 5 3/4"
 Intermediate Shafts, diameter as per Rule _____ Thrust shaft, diameter at collars as per Rule _____
 as fitted 1 3/8" as fitted 1 1/4"
 Shafts, diameter as per Rule _____ Screw Shaft, diameter as per Rule _____ shaft fitted with a continuous liner NOT EXAMINED.
 as fitted _____ as fitted 1 5/8" (3 1/2" @ length) as the screw SEE PLAN.
 Liners, thickness in way of bushes as per Rule 3/4" Thickness between bushes _____ Is the after end of the liner made watertight in the
 as fitted _____ as fitted _____
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner _____
 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 _____
 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
 If so, state type _____ Length of Bearing in Stern Bush next to and supporting propeller _____
 Pitch _____ No. of Blades _____ Material _____ whether Movable _____ Total Developed Surface _____ sq. feet
 Pumps worked from the Main Engines, No. NONE Diameter _____ Stroke _____ Can one be overhauled while the other is at work _____
 Pumps worked from the Main Engines, No. ONE Diameter 5" Stroke 21" Can one be overhauled while the other is at work ✓
 No. and size TWO, 12" x 8" x 18" STROKE Pumps connected to the Main Bilge Line { No. and size ONE, M.E. RAM. & ONE HORIZ. DUPLEX PUMP.
 How driven STEAM. How driven STEAM
 Pumps, No. and size ONE HORIZ. DUPLEX PUMP Lubricating Oil Pumps, including Spare Pump, No. and size _____
 independent means arranged for circulating water through the Oil Cooler ✓ Suctions, connected to both Main Bilge Pumps and Auxiliary
 Pumps;—In Engine and Boiler Room ENG. ROOM. 1 each p. + s. 3 1/2" THRUST RECESS. @ 3 1/2". BOILER ROOM. 1 each p. + s. 3 1/2"
 In Holds, &c. N^o 1. 2 @ 3 1/2". N^o 2. 2 @ 3". FWD. C.F. DAM. 2 @ 3 1/2". AFT C.F. DAM. 2 @ 3 1/2"
N^o 3. 2 @ 3 1/2". N^o 4. 2 @ 3 1/2" TUNNEL WELL. @ 3 1/2" ALSO SEPARATE STEAM PUMP IN TUNNEL DISCHARGING TO ENG. ROOM BILGES - 1 1/4"
 Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 10 1/2" Independent Power Pump Direct Suctions to the Engine Room Bilges,
 size _____ Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes YES
 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 SEE OVER PAGE.
 Sea Connections fitted direct on the skin of the ship YES Are they fitted with Valves or Cocks BOTH
 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 _____
 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 _____
 pipes pass through the bunkers _____ How are they protected _____
 pipes pass through the deep tanks BILGE + BALLAST PIPES TO FWD. PART OF SHIP. Have they been tested as per Rule NO
 Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times YES
 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
 ment to another YES Is the Shaft Tunnel watertight ✓ Is it fitted with a watertight door YES worked from LEVEL OF CYL. TOPS OF MAIN ENG. IN ENG. ROOM.

BOILERS, &c.—(Letter for record _____) Total Heating Surface of Boilers _____
 Draft fitted YES No. and Description of Boilers 3 MULTITUBULAR SCOTCH TYPE. Working Pressure _____
REPORT ON MAIN BOILERS NOW FORWARDED? YES
DONKEY BOILER FITTED? NO If so, is a report now forwarded? ✓
 donkey boiler intended to be used for domestic purposes only ✓
 Are approved plans forwarded herewith for Shafting YES Main Boilers ✓ Auxiliary Boilers NONE FITTED Donkey Boilers NINE FITTED.
 (If not state date of approval)
 Water NONE FITTED General Pumping Arrangements ✓ Oil fuel Burning Piping Arrangements ✓

SPARE GEAR.

spare gear required by the Rules been supplied NOT CHECKED.
 principal additional spare gear supplied _____

The foregoing is a correct description,

Manufacturer.



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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 Slides Covers

Pistons Piston Rods Connecting rods

Crank shaft Thrust shaft Intermediate shafts

Tube shaft Screw shaft Propeller

Stern tube Engine and boiler seatings Engines holding down bolts

Completion of fitting sea connections

Completion of pumping arrangements Boilers fixed Engines tried under steam

Main boiler safety valves adjusted Thickness of adjusting washers

Crank shaft material Identification Mark Thrust shaft material Identification Mark

Intermediate shafts, material Identification Marks Tube shaft, material Identification Mark

Screw shaft, material Identification Mark Steam Pipes, material Test pressure Date of Test

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

Have the requirements of the Rules for the use of oil as fuel been complied with

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 **UNKNOWN** If so, state name of vessel

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

The bilge suction tail pipes in Engine & Boiler Rooms are not straight, & the mudboxes are fitted near to the bilge distribution valve chests. Both mudboxes & tail pipes are, however, considered to be accessible.

Bilge suction tail pipes in holds are not straight & in each case, a valve is fitted which is controllable from deck. Some of these deck controls were found to be unworkable, but all bilges have been seen to be in good order & easily pumped out.

Double-bottom tanks N^o 1-2-3-5-6/^{Dupl tank} and F.P. tank are used for carriage of fuel oil & each can be pumped up by Ballast Pump or Oil Fuel Transfer Pump. Arrangements embodying portable branch pieces/^{or blank flanges} are made for isolating as required.

N^o 4 D.B.T. & A.P. Tank are used for fresh water & have no connection to Ballast Pump - a separate F.W. Pump being used. These tanks cannot be pumped up.

Suction & Filling pipes.

F.P. Tank 1 @ 4" φ

N^o 1 DB.T. 2 @ 4" φ

N^o 2 - 2 @ 4" φ

N^o 3 - 2 @ 4" φ

Dupl tank 2 @ 4" φ
2 @ 3" φ

N^o 5 DB.T. 2 @ 4" φ
2 @ 3" φ

N^o 6 - 2 @ 4" φ

Settling Tanks 2 @ 3 1/2" φ
built into
Dupl tank

Air Pipes

F.P. Tank. 1 @ 4" φ

N^o 1 DB.T. 2 @ 4" φ
2 @ 3" φ

N^o 2 - 4 @ 3" φ

N^o 3 - 4 @ 3" φ

Dupl tank 2 @ 3" φ
2 @ 4" φ

N^o 5 DB.T. 2 @ 3" φ

N^o 6 - 2 @ 4" φ

Settling Tanks. 2 @ 3" φ

All the above fitted with goose necks, wire gauge & a ball type N.R. Valve inside.

Pump Connections.

Bilge (Duplex) draws from:- Boiler bottoms, Sea, Bilge Main, Eng. & Bl. Room Bilges.

- - discharges to:- Overboard, deck & main condenser. & Eng. & Bl. room fire hoses.

Ballast pump draws from:- Sea, Tanks except N^o 4 DB.T. & A.P.T. & Bilge Main.

- - discharges to:- Tanks & overboard.

Oil Fuel Transfer pump draws from & discharges to all O.F. Tanks. Discharge line has connections for filling tanks from deck with suitable shut. off valves.

Certificate to be sent to

The amount of Entry Fee ... £ : : When applied for from London 23-1-1941

Special ... £ 20 : : When received.

Donkey Boiler Fee ... £ : : 19

Travelling Expenses (if any) £ : : 19

H. Knowles.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

No action



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