

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

NOV 20 1940

(Received at London Office)

Date of writing Report 5.11.40. 1940, When handed in at Local Office 5.11.40. 1940 Port of SWANSEA.

No. in Survey held at SWANSEA. Date, First Survey 9th AUG. Last Survey 10th OCT. 1940.
 Reg. Book. 13627. on the Machinery of the Wood, Iron or Steel SC. "EMPIRE BUFFALO" EX "EGLANTINE" (No. of Visits 24.)

Tonnage { Gross 6404. Vessel built at Seattle, Wash. By whom Skinner & Eddy Corp. When 1919 -
 Net 4618 Engines made at Hamilton, O. By whom Hovver, Owens, & Kentschler When 1919 -
 Nominal Horse Power 359 420 Boilers, when made (Main) 1919. (Donkey) -
 No. of Main Boilers 308 Owners Ministry of Shipping Owners' Address (if not already recorded in Register Book.)
 No. of Donkey Boilers - Managers Lyle Shipping Co Ltd. Port London Voyage -
 Steam Pressure in Main Boilers 210 lbs. If Surveyed Afloat or in Dry Dock YES. (State name of Dock.) -
 in Donkey Boilers -

Particulars of Classification (which must be inserted precisely as in Register Book & Supplements).

CHARACTER for Special Survey Date of last Survey and of Periodical Surveys.	Years assigned now or when reclassified.	Machinery and Boiler Surveys (including date of N.B., if any).
100 A 1.		LMC
(CLASS CONTEMPLATED)		
EXAMINED. 6.40. N.O.s.		

Last Report No. 1703. Port MOBILE, ALA.Particulars of Examination and Repairs (if any) LMC.10.40

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 ✓

Was a damage report made by anyone else? If so, by whom? ✓

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? ✓

State latest date of internal examination of each boiler P&S.B. 12.8.40 - CB. 25.9.40. Present condition of funnel(s) SATISFACTORY.

Did the Surveyor examine the Safety Valves of the Main Boilers? YES. To what pressure were they afterwards adjusted under steam? 210 lbs. 2"

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? YES. , 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? NO. 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 ✓ Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated? ✓

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.

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

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

If the Survey is not complete, state what arrangements have been made for its completion and what remains to be done. LMC.10.40. NOT COMPLETE.

It is stated that the Survey will be Completed at the first Convenient opportunity. To COMPLETE LMC.10.40. The following remains to be done: - STEAMPIPES. To test to Rule requirements.

OIL FUEL INSTALL. Fuel tank valves & deck Controls to examine. ELECTRIC INSTALL. To completely examine & insulation resistance tests to carry out to Rule requirements. PUMPING ARRANGEMENTS. The valves, cocks, pipes & strainers to examine.

NOW DONE FOR LMC.10.40. The cylinders, pistons, slide valves, crank, thrust & intermediate shafting of the main engine opened out, examined, & placed in efficient condition. The main & auxiliary Condensers opened out, examined & tested, & air, circulating, feed & bilge pumps & all auxiliary machinery except the electric light installation, opened out, overhauled & placed in good working condition.

The port, Centre & starb^d boilers opened out, examined internally & externally, together

General Observations, Opinion, and Recommendation:—

(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.&M.S. 9.11, & L.M.C. 9.11, or L.M.C. 140 lb., F.D., &c.)

The engines & Boilers of this vessel are eligible in my opinion to be classed with this Society & to have the notation & record of survey LMC.10.40 when the survey has been satisfactorily completed.

Survey Fee (per Section 29) LMC. £ 12.-
 MCHY. REPAIRS. £ 15-15-0.
 Special Damage or Repair Fee (if any) £ 27-15-0.
 Travelling expenses (if chargeable) £ 12-11-1940

Fees applied for
 30.10.40
 £ 27-15-0.
 Received by me,
 12-11-1940

Freeman
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

— STEEL S.S. "EMPIRE BUFFALO" —

with their safety valves, mountings, drain cocks, manhole doors, slatings, collision chocks & funnel. The steam pipes examined in place as far as practicable without stripping, & the safety valves adjusted under steam to W.P. of 210 lbs. & found satisfactory.

The oil fuel installation examined & seen under working conditions, except the examination of fuel tank valves, & deck controls, & found satisfactory.

The electric light generally examined & seen under working conditions.

REPAIRS: Main Engine. Engine stop valve spindle renewed.

WEAR & TEAR. HP. cylinder walls & piston rings dressed up. Broken & defective junk ring studs renewed. Top end crosshead brasses dressed & oil grooves recut.

MP piston, junk ring & carrier faced up in lathe & new piston rings fitted.

MP crosshead pint skimmed up in lathe & fwd & after top end brasses remetalled.

MP piston rod skimmed up in lathe & new U.S. Metallic packing fitted.

MP. Astern guide bars planed up in shop & adjusted.

LP. starb. piston valve rod skimmed up in lathe & new U.S. Metallic packing fitted.

Crank shaft lifted (1/4" down) & all top & bottom half main bearings remetalled & lined up to Builders Gauge & original settings.

Shroud shaft lifted, fwd & after bearings remetalled lower halves, & all thrust shoes (8) remetalled on ahead sides & adjusted.

HP. MP & LP. Connecting rod bottom end bearings remetalled & piston clearances adjusted.

Spare top end crosshead brasses & spare bottom end brasses remetalled.

Nº 6 tunnel shaft bearing removed, dressed up & oil grooves recut.

All water service pipes overhauled & placed in good working order.

Engine foundation bolts hardened up. Sundry minor repairs carried out.

Main Condenser. 2 defective ribs in forward door repaired & reinforced by cast iron angles. Defective stay bolt bores knifed down to good metal & new metal pieces fitted. Defective studs & grommets renewed.

Aux. Condenser. New cast iron division plate fitted & minor repairs.

Ind. Air Pumps. Dual type. Bucket, foot & head valve seats of both pumps faced up, new valve springs & studs fitted throughout. 2 pump rods skimmed & new neck & gland fitted. New steam piston rings fitted.

Ind. Circulating Pump. Generally overhauled. Oil grooves recut. New flywheel key fitted.

Feed Pump. Wier type. Defect in pump casting repaired. Piston rod skimmed & new bushes & water end bucket rings renewed & new steam piston rings fitted.

Aux. Feed Pump Wier Type. Steam piston turned in lathe & new rings fitted. New bucket rings fitted. Piston & pump rods skimmed & new bushes fitted.

Ind. Combined Horizontal Aux. Condenser Air & Circ. Pumps. New air pump chamber liner fitted. Comb. Air & Circ. pump rod renewed. Bushes renewed. Air pump bucket skimmed up & new rings fitted. New rings fitted to Circ. pump bucket. Valve studs & springs renewed.

Duplex Horizontal Bilge Pumps. Worthington type. 2 new water end liners fitted. New neck & g. bushes fitted. 1 steam piston & all piston rings renewed. Suction & delivery valves overhauled.

Horizontal Duplex Ballast Pump. Worthington type. Steam piston rings renewed. Bucket rings renewed. 4 suction & delivery valve seats renewed. 24 valves & seats faced up in lathe.

Sanitary Pump. Horiz. Duplex type. Completely renewed by Hayward & Tyler 7 1/2" x 5" x 6"

Oil Transfer Pump. Generally overhauled. New brass studs for auc. & del. valves fitted & new bucket rings fitted.

Oil Fuel Pumps. Generally overhauled. Sundry minor repairs. One new piston & rings fitted.

Boilers. Bottom manhole doors of P & S boilers (4) built up by electric welding. 2 Bottom manhole doors of Centre boiler renewed.

Starb. Boiler. Main Check Valve & shut off valve & auxiliary Check Valve renewed (3) with valve

Port Boiler. Main Check Valve & Aux. Check & shut off valves renewed (3) with valve chests.

6 Tested Valves fitted & markings on 4 Valve chests only verified:— 5301. Lloyds Test 52 5.9.40. M. Please refer to Cardiff Rpt. 7a. Nº 5301 attached hereto.

Sundry minor caulking repairs to all boilers carried out & minor repairs

mountings effected. Oil fuel heaters overhauled.

NOTE:— Starb. Boiler. A welded compensation ring has been welded to the 5th Corrugation from front end of the starb. wing furnace at some previous date. Now examined & found satisfactory & no apparent sign of deformation either on this Corrugation or on this furnace. All Superheater elements in the Centre boiler had been removed

at some previous date. The superheater elements in the port & starboard boilers not completely removed from uptakes & superheated steam connections all blanked off.

The main & auxiliary machinery examined under working conditions. Main engine at slow speeds ahead & astern alongside Quay, & found satisfactory.

The steering engine & windlass opened out, examined & placed in efficient condition.

H.