

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

No. 3729

(Received at London Office)

29 APR 1948

of writing Report. 19 When handed in at Local Office. 19 Port of Seattle, Washington
Survey held at Seattle, Washington Date, First Survey Oct. 13, 1947 Last Survey February 20th 19 48
on the Machinery of the Wood-Iron or Steel SS. "MINERVE" (ex "Donner Lake") (No. of Visits 26)

Gross 10448 Vessel built at Portland, Oregon By whom Kaiser Company, Inc. When 1944
Net 6301 Engines made at Lynn, Mass. By whom General Electric Co. When 1944
1324 Boilers, when made (Main) 1944 (Donkey) X
Main Boilers 2 WT Owners Government of France Owners' Address 82 Ave des Champs Elisse
Donkey Boilers - Managers X (if not already recorded in Appendix to Register Book.)
Boilers 500 lbs. Port Le Havre (contemplate Voyage) X
If Surveyed Afloat or in Dry Dock Both
(State name of Dock.) Todd Shipyards, Seattle Division

Report No. Port
Particulars of Examination and Repairs (if any) Classification Contemplated
Particulars of Classification (which must be inserted precisely as in Register Book & Supplements).

as not done, state for what reasons? X
parts of the Boilers could not be thus thoroughly examined? X
at special means, in the absence of internal examination, were adopted by the } Hydrostatically tested to 525 lbs. per sq.in. P&S Boilers
Surveyor to assure himself of the thorough efficiency of those parts of each Boiler? }
Date of internal examination of each boiler February 5th, 1948 Present condition of funnel(s) Good
Surveyor examine the Safety Valves of the Main Boiler? Yes To what pressure were they afterwards adjusted under steam? 500 lbs. per sq.in.
Surveyor examine the Safety Valves of Donkey Boiler? X Superheaters 475 lbs. per sq.in.
Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? Yes, and of the Donkey Boilers? X
Surveyor examine the drain plugs of the Main Boilers? Valves. Yes, and of the Donkey Boilers? X
Surveyor examine all the mountings of the Main Boilers? Yes, and of the Donkey Boilers? X
Shaft now been drawn and examined? Yes Is it fitted with continuous liner? Yes Is an approved appliance fitted at the after end of }
the shaft to permit of it being efficiently lubricated? } X
Shaft now been changed? No If so, state reasons X
Shaft now fitted been previously used? X Has it a continuous liner? X Is an approved appliance fitted at the after end of }
the shaft to permit of it being efficiently lubricated? } X
Date of examination of Screw Shaft Dec. 24, 1947 State the distance between Micarta lignum-vitae or bearing metal of stern bush and top of after bearing of screw shaft 1/8"
Engine parts, when referred to by numbers, should be counted from forward. Is electric light and/or power fitted? Yes
Did the Surveyor examine the generators, motors, switchgear, cables and fuses? Yes
Insulation resistance of the generators, circuits and apparatus been tested and found to be not less than 100,000 ohms? Yes
Survey is not complete, state what arrangements have been made for its completion and what remains to be done Complete

ONE FOR LMC: Vessel placed in drydock. Propeller, stern bearing with its fastenings, sea chests and valves examined, found or now placed in good condition; seastrainer plates removed, chests cleaned and coated. Stern gland repacked. Tail shaft with continuous liner drawn, examined, and replaced in order. Both WT Boilers examined internally and externally, with all doors, safety valves, mountings and piping, all found in good condition, safety valves, and superheater valves adjusted under steam as above. Fuel oil burning in pumps, piping heaters, valves and deck control examined, and also tested under working conditions, and found or in good order. Fire equipment examined, tested and found efficient. Propulsion Motor: Opened complete and examined, stator and rotor windings, Megger tested, air cooler cleaned and hydrostatically tested to 30 lbs. and proven tight.

Turbine: Casings and rotor lifted, Rotor and Stationary blading, Rotor shaft bearings and journals, thrust (PTO)
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.G.M.S. 9,11, L.M.C. 9,11, or L.M.C. 140 lb., F.D., &c.)
CS 3,34,
Boilers and Machinery of this vessel are in good and safe working condition, and eligible in my opinion, to have a
of LMC. 2-48 and Tail Shaft seen 12-47.

Fee (per Section 29) \$: 450.00 Fees applied for Feb. 25 19 48
Damage or Repair Fee (if any) \$: :
(per Section 29.)
Expenses (if chargeable) \$: 50.00
Committee's Minute
red LMC-2, 48 subject
T. S. 12, 47.
500 lbs.
NEW YORK APR 7 1948
James F. Robertson
Engineer Surveyor to Lloyd's Register of Shipping.
Lloyd's Register Foundation
005013-005019-0029

bearings, nozzle and control valves, and governor gear, examined and found or placed in good condition.

Main Generator: Rotor and stator windings cleaned and coated, Rotor field removed to G.E. shop, overhauled and dynamically balanced, high potential test of 1440 volts applied for one minute duration, Megger tested, and replaced in good order.

Thrust and Thrust Shaft: Bearings, thrust collar and shoes examined and found in good order. Intermediate shaft and bearing also found in good order.

Pumps, piping and pumping arrangements examined, tested and found in good order.

The following Auxiliary Machinery opened and examined throughout: - Main and Auxiliary Condensers opened, examined and tested, and water boxes coated. Main and Auxiliary Circulating pumps, with motors, two (2) Turbo driven centrifugal feed pumps, starboard side tunnel recess, two (2) fuel oil transfer pumps, inboard and outboard, with electric motors, stbd. lower Engine Room, two (2) Fuel oil service pumps, ford. and aft, with electric motors, Stbd lower E. R., two (2) Evaporator feed pumps, ford. and aft, with electric motors Port side aft E.R., Two (2) Fresh water pumps, Inboard and outboard, with electric motors, Port side lower E.R. TWO (2) Main condensate pumps, Port and Stbd. Ford. of condenser, lower engine room, Auxiliary condensate pump, with electric motor, Stbd. side lower E.R. Fire and Butterworth Pump with electric motor, Port side tunnel recess, Fire and Butterworth Pump with electric motor, Port side lower E.R. Engine Room bilge pump, with electric motor Port side tunnel recess, Engine Room bilge pump with electric motor, Port side lower engine room, Drinking water pump with electric motor, Stbd. side of Boiler Room, Fresh water pump with electric motor, main deck amidship, Fuel oil transfer pump, steam driven, forward pump room, Bilge and Ballast pump steam driven, forward pump room, Salt water service pump with electric motor, Port side tunnel recess, sanitary pump with electric motor, Port side tunnel recess, Port, Center and Stbd. cargo pumps with electric motors, Motors in engine room, and pumps in after pump room, Port and Starboard stripping pumps with electric motors, motors in engine room, pumps in after pump room, Cargo stripping pump steam driven, After pump room. Two evaporators port side E. R. flat, opened, cleaned and tested. Two (2) Lubricating oil cooler after upper E.R. opened, cleaned and tested. Two (2) fuel oil heaters, Port boiler room ford. cleaned and tested. Main and Auxiliary air ejectors port side after E.R. opened, examined and closed in order. Auxiliary Feed Pump, steam simplex, stbd. after lower E.R. Inboard and outboard auxiliary generators and turbines, Stbd. upper E. R. flat. 50 K.W. Auxiliary Turbo Generator, Stbd. aft upper E.R. Flat.

Machinery Repairs

Main turbine, all stationary and rotor blading cleaned, labyrinth packing removed and freed up, internal surfaces of turbine casings and rotor wire brushed and cleaned, bearings and thrust checked and adjusted, overspeed governor checked, cleaned, and adjusted. All replaced in good order.

Inboard and Outboard auxiliary Generators, Turbine and reduction casings removed, casing and rotor blading cleaned, journals cleaned, and all bearings checked and adjusted, packing renewed as necessary, oil piping removed, cleaned, and replaced. Machines closed in good order.

Lubricating Oil Pumps, bearings renewed. Auxiliary Feed pump steam piston rod renewed.

Port and Stbd. Condensate pumps, casing rings trued up, and wearing rings renewed. Shaft sleeves renewed, also ball bearings. Fire and Butterworth Pump, 2 bronze shaft sleeves in way of packing renewed, and ball bearings renewed. Main circulating pump, shaft trued up and bearings remetaled. Main Turbo feed pumps removed to shop comp overhauled and bearings renewed as necessary.

Vertical sliding water-tight, door now fitted between engine room and shaft tunnel or recess operated by shafting a bevel gearing from weather deck level in upper Engine Room. Same tested and found in order.

Boiler Repairs: All Boiler valves ground in and repacked. All boiler tubes turbinized, front and back headers repacked. All soot blowers removed, overhauled and replaced. Furnace front walls and floors re-bricked in both boilers and side and back walls repaired as necessary. Both Boilers Hydrostatically tested to 525 lbs. and proven tight.

Electrical Repairs - Main circulating pump motor removed to shop, overhauled, dried out, baked, balanced and replaced in good order. Center forced draft fan motor replaced new at this time. All fuses throughout the vessel examined and fitted with non-renewable type, with refractory filler, Pump room fixtures, glass shade gaskets renewed in ford. and after pump rooms. Lightning conductor on wood signal mast amidships installed.

Auxiliary Generators, Inboard and outboard, tested under full load. Governors tested by throwing the full load on off. Collector gings on both generators overhauled and brushes refitted, generator windings cleaned and coated. Cargo and all other motor control boxes, cleaned, dried, and adjusted.

Amplidyne for Auxiliary Generators removed to G.E. shop, thoroughly overhauled and replaced in good order.

All electric motors to cargo pumps and auxiliary machinery were opened out thoroughly cleaned, dried and coated, and all bearing adjusted or renewed as necessary.

The electric installation was examined under working conditions, generators, cables, fittings on the main switchboard and distribution boxes. Insulation resistance tests made on all circuits, repairs effected, and all found or now placed in good order.

(NOTE) Due to the badly damaged condition of the Main Propulsion synchronous Motor, when the vessel was purchased by the French Government from the U. S. Maritime Commission: namely, 48 bottom stator coils and laminations badly burned and distorted. The new owners elected to purchase a complete new G.E. Motor of the same type from the U. S. Maritime Commission, which was installed in the vessel at this time.

Also, installed on the Port Upper Poop Deck was a new 94 KVA-3 Phase 60-Cycle A.C. Emergency Diesel Generator set complete. This installation was tried out and tested under working conditions and found satisfactory.

All machinery seen under working conditions during dock and sea trials, when all was found to operate in a satisfactory manner.

J.F.B.



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