

REPORT ON STEAM TURBINE MACHINERY. No. 5006

3 AUG 1948

Received at London Office.

Report 15TH JUNE 1948 When handed in at Local Office 16TH JUNE 1948 Port of GALVESTON TEXAS
 Survey held at GALVESTON TEXAS Date, First Survey 26TH MAY 48 Last Survey 12TH JUNE 1948
 on the S.S. MESA VERDE (Number of Visits CONTINUOUS.)
 Tons { Gross 10640
 Net 6313
 made at PORTLAND OREGON By whom built KAISER CO INC Yard No. 99 When built 1944-11
 made at LYNN MASS. By whom made GENERAL ELECTRIC CO Engine No. 68246 When made 1944-11
 made at ST LOUIS MO. By whom made COMBUSTION ENGINEERING CO Boiler No. 9669 When made 1944-11
 Horse Power at Full Power 6000 Owners BRITISH TANKERS CO Port belonging to LONDON
 Horse Power as per Rule 1396 (1425) MN=1486 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted YES
 for which Vessel is intended PETROLEUM IN BULK

STEAM TURBINE ENGINES, &C.—Description of Engines ONE CURTIS IMPULSE 10 STAGE TURBINE

Ahead ONE Direct coupled, single reduction geared } No. of primary pinions to each set of reduction gearing
 Astern ✓ double reduction geared }
 coupled to { Alternating Current Generator 3 phase 60/62 periods per second } rated 4925/5400 Kilowatts 2300/2320 Volts at 3600/3715 revolutions per minute;
 Direct Current Generator }
 driving power for driving ONE Propelling Motors, Type TSM-HL-80 ONE SYNCHRONOUS MOTOR (ABS 3820NY. 8-22-44)
 625 Kilowatts 2300 Volts at 90 revolutions per minute. Direct coupled, single or double reduction geared to ONE propelling shafts.

EXPANSION	H. P.			I. P.			L. P.			ASTERN.		
	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
10 STAGE UNIT.												

Horse Power at each turbine { H.P. 7240
 I.P. ✓
 L.P. ✓ } Revolutions per minute, at full power, of each Turbine Shaft { H.P. 3600
 I.P. ✓
 L.P. ✓ } 1st reduction wheel ✓
 main shaft 90 ✓

Shaft diameter at journals { H.P. 5" + 10"
 I.P. ✓
 L.P. ✓ } Pitch Circle Diameter { 1st pinion ✓
 2nd pinion ✓ } 1st reduction wheel ✓
 main wheel ✓ } Width of Face { 1st reduction wheel ✓
 main wheel ✓ }

between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion ✓
 2nd pinion ✓ } 1st reduction wheel ✓
 main wheel ✓ }
 Pinion diameter { 1st ✓
 2nd ✓ } Pinion Shafts, diameter at bearings External 1st ✓
 Internal 2nd ✓ } diameter at bottom of pinion teeth { 1st ✓
 2nd ✓ }

Shafts, diameter at bearings { 1st ✓
 main ✓ } diameter at wheel shroud, { 1st ✓
 main ✓ } Generator Shaft, diameter at bearings 5 1/2"
 Propelling Motor Shaft, diameter at bearings 17.268" ✓
 Intermediate Shafts, diameter as per rule 16 1/2"
 as fitted 16 7/8" ✓ } Thrust Shaft, diameter at collars as per rule 17.325"
 as fitted 18" ✓ } Tube Shaft, diameter as per rule ✓
 as fitted ✓ }

Shaft, diameter as per rule 18 1/8"
 as fitted 18 5/8" ✓ } Is the screw } shaft fitted with a continuous liner { YES ✓
 as per rule .65"
 as fitted 31/32" } 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 fusion through the whole thickness of the liner YES ✓
 If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a material insoluble in water and non-corrosive. ✓
 If two liners are fitted, is the shaft lapped or protected between the liners. ✓
 Is an approved Oil Gland appliance fitted at the after end of the tube shaft. No ✓
 Length of Bearing in Stern Bush next to and supporting propeller. 7-3" ✓

Propeller, diameter 19-6" Pitch 17.6 @ 6.6" No. of Blades 4 State whether Moveable SOLID Total Developed Surface 138.30 square feet.
 Screw, are arrangements made so that steam can be led direct to the L.P. Turbine ONE TURBINE Can the H.P. or I.P. Turbine exhaust direct to the
 YES No. of Turbines fitted with astern wheels. ✓ Feed Pumps { No. and size TWO 200 GPM ✓ ONE 10" x 7" x 24" 130 GPM
 How driven STEAM TURBO-UNITS. STEAM VERT SIMPLEX

connected to the Main Bilge Line { No. and size ER. TWO 175 GPM + ONE 450 GPM. FORD PR. ONE 300 GPM AFT PR ONE 700 GPM.
 How driven ELECTRIC CENTRIFUGAL VERT DUPLEX 10" x 7" x 10" VERT DUPLEX 14" x 14" x 12" STEAM
 Pumps, No. and size FORD PR. ONE 10" x 7" x 10" 300 GPM V.D. AFT PR. " 14" x 14" x 12" 700 GPM } Lubricating Oil Pumps, including Spare Pump, No. and size TWO 60 GPM. ROTEX ELE.

Independent means arranged for circulating water through the Oil Cooler. YES Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge
 No. and size:—In Engine and Boiler Room ER. ELEVEN 3" DIA INTO 4" MAIN + ONE 2" DIA; TWO 3 1/2" DIA INTO 4" LINE; BR. FLAT FOUR 2 1/2" DIA INTO 2 1/2" LINE.
 & C FORE & AFT PEAKS ONE EACH; CHAIN LOCKER 2" EJECTOR; FORD PR. TWO 2 1/2"; AFT PR. ONE 4" + AFT CD TWO 3" DIA; DRY STORE FORD TWO 2 1/2" DIA.

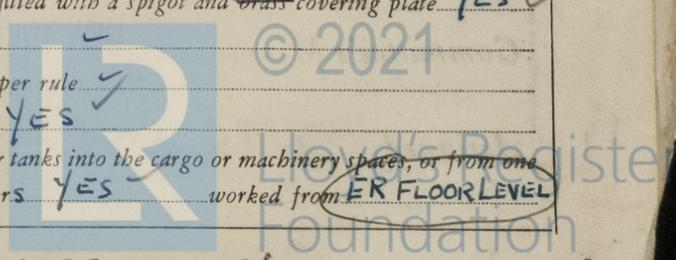
Water Circulating Pump Direct Bilge Suctions, No. and size ONE 18" DIA. Independent Power Pump Direct Suctions to the Engine Room
 No. and size TWO 4" DIA. ✓ Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes. YES ✓
 Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges. YES ✓
 Sea Connections fitted direct on the skin of the ship BOXES OR SPOOLS Are they fitted with Valves or Cocks. VALVES ✓

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 ✓
 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. YES ✓
 pipes pass through the bunkers. ✓ How are they protected. ✓
 pipes pass through the deep tanks. ✓ Have they been tested as per rule. ✓

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
 compartment to another. YES ✓ Is the Shaft Tunnel watertight. YES ✓ Is it fitted with a watertight doors. YES ✓ worked from ER FLOOR LEVEL

005377-005386-0302

Sw
30/8/48



BOILERS, &c.— (Letter for record *S.*) Total Heating Surface of Boilers *11352 SQ FT*
 Is Forced Draft fitted *YES* No. and Description of Boilers *TWO SINGLE PASS STRAIGHT TUBE SECT HEADERS WITH SUPERHEATERS & AIR HEATERS* Working Pressure *500 LBS*
 Is a Report on Main Boilers now forwarded? *YES*
 Is *a Donkey* Boiler fitted? *NO* If so, is a report now forwarded? *YES*
 Plans. Are ~~approved~~ plans forwarded herewith for Shafting *YES* Main Boilers *YES* Auxiliary Boilers *YES* Donkey Boilers *YES*
 (If not state date of approval) *T2 TANKER TYPE.*
 Superheaters *YES* General Pumping Arrangements *YES* Oil Fuel Burning Arrangements *YES*
 Spare Gear. State the articles supplied:— *SUPPLIED TO RULE REQUIREMENTS*

The foregoing is a correct description,

Dates of Survey while building { During progress of work in shops - - } *YES*
 { During erection on board vessel - - - } *YES*
 Total No. of visits *YES*

Dates of Examination of principal parts—Casings *YES* Rotors *YES* Blading *YES* Gearing *YES*
 MOTOR Wheel shaft *2 JUNE 48* Thrust shaft *29 MAY 48* Intermediate shafts *29 MAY 48* Tube shaft *YES* Screw shaft *YES*
 Propeller *4TH JUNE 48* Stern tube *YES* Engine and boiler seatings *2 JUNE 48* Engine holding down bolts *2ND JUNE 48*
 Completion of pumping arrangements *YES* Boilers fixed *YES* Engines tried under steam *12TH JUNE 48*
 Main boiler safety valves adjusted *10TH JUNE 48* Thickness of adjusting washers *YES*

Rotor shaft, Material and tensile strength *YES* Identification Mark *YES*
 Flexible Pinion Shaft, Material and tensile strength *YES* Identification Mark *YES*
 Pinion shaft, Material and tensile strength *YES* Identification Mark *YES*
 1st Reduction Wheel Shaft, Material and tensile strength *YES* Identification Mark *YES*
 Wheel shaft, Material *YES* Identification Mark *YES* Thrust shaft, Material *DH STEEL* Identification Mark *ABMK.31 HT*
 Intermediate shafts, Material *DH STEEL* Identification Marks *AB 596A.* Tube shaft, Material *—* Identification Marks *—*
 Screw shaft, Material *DH STEEL* Identification Marks *AB596B. 9.25.44* Steam Pipes, Material *SEAMLESS STEEL* Test pressure *750 LBS*
 Date of test *31 MAY 48* 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 *YES*
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *TANKER.* If so, have the requirements of the Rules been complied with *YES*
 Is this machinery a duplicate of a previous case *YES* If so, state name of vessel *T2 TYPE TANKERS.*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery + boilers of this vessel were constructed under Special Survey of the American Bureau of Shipping + U.S.C.G. The condition + standard of work are considered to be good and satisfactory.*
The main and auxiliary machinery as opened for survey (see Rpt 9) are in good condition, all were examined under working conditions and found satisfactory.
The machinery + boilers of this vessel are eligible, in my opinion, to be classed with this Society, with a record of LMC 6.48 is recommended for the favourable consideration of the Committee.

Certificate (if required) to be sent to:
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee	£	:	:	When applied for,
Special	£	:	:	19
Donkey Boiler Fee	£	:	:	When received,
Travelling Expenses (if any)	£	:	:	19

J. Bloomfield
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *NEW YORK JUL 14 1948*
 Assigned *LMC 6.48 subject (See Rpt. 9 attached)*