

Rpt. 4b

Oct. 24, 1961
Date of writing report
Received London
Port Miami
No. 364
Survey held at Miami
No. of visits
In shops
First date July 18, 1961
Last date Oct. 25, 1961
On vessel

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. Name MARIA VERONICA Gross tons 970.90
J. Manuel Cordova
Owners same
Managers same
Port of Registry Valpariso
Hull built at Houston, Texas By Brown Shipbuilding Co. Yard No. Year Month
Main Engines made at Beloit, Wis. By Fairbanks Morse Eng. No. When 1944
Gearing made at By
Donkey boilers made at By Blr. Nos. When
Machinery installed at Houston, Texas By Brown Shipbuilding Company When 1944

Particulars of restricted service of ship, if limited for classification
Coastwise service in Chile

Particulars of vegetable or similar cargo oil notation, if required

Is ship to be classed for navigation in ice? no Is ship intended to carry petroleum in bulk? no

Is refrigerating machinery fitted? yes If so, is it for cargo purposes? no Type of refrigerant Freon

Is the refrigerating machinery compartment isolated from the propelling machinery space? yes Is the refrigerated cargo installation intended to be classed? --

The following particulars should be given as fully and as clearly as possible. Where the answer is "No" or "None", say so! Ticks and other signs of doubtful meaning are not to be used. Where the rating is not applicable to the installation, a black line may be inserted. If the main engines have been constructed at another port and are covered by a separate report, the particulars given in that report need not be repeated below, but the port and report number should be stated.

No. of main engines 2 No. of propellers 2 Brief description of propulsion system

MAIN RECIPROCATING ENGINES. Licence Name and Type No. Fairbanks Morse opposed piston

No. of cylinders per engine 10 Dia. of cylinders 8 1/8 stroke(s) 10 2 or 4 stroke cycle 2 Single or double acting single

Maximum approved BHP per engine 1800 at 800 RPM of engine and same RPM of propeller.

Corresponding MIP (For DA engines give MIP top & bottom) Maximum cylinder pressure Machinery numeral

Are the cylinders arranged in Vee or other special formation? in line If so, number of crankshafts per engine 2, upper & lower

NO STROKE ENGINES. Is the engine of opposed piston type? yes If so, how are upper pistons connected to crankshaft? connecting rods

Is the exhaust discharged through ports in the cylinders or through valve(s) in the cylinder covers? ports No. and type of mechanically driven scavenge pumps or blowers per

engine and how driven one, engine driven

No. of exhaust gas driven scavenge blowers per engine none Where exhaust gas driven blowers only are fitted, can the engine operate with one blower out of action? --

Is a stand-by or emergency pump or blower fitted, state how driven -- No. of scavenge air coolers -- Scavenge air pressure at full

power -- Are scavenge manifold explosion relief valves fitted? yes

OUR STROKE ENGINES. Is the engine supercharged? Are the undersides of the pistons arranged as supercharge pumps? No. of exhaust gas driven blowers per

engine No. of supercharge air coolers per engine Supercharge air pressure Can engine operate without supercharger?

NO EXFOUR STROKE ENGINES—GENERAL. No. of valves per cylinder: Fuel 2 Inlet -- Exhaust -- Starting 1 Safety 1

Material of cylinder covers -- Material of piston crowns aluminum Is the engine equipped to operate on heavy fuel oil? no

Cooling medium for: Cylinders water Pistons -- Fuel valves -- Overall diameter of piston rod for double acting engines T shaped, forged

Is the rod fitted with a sleeve? no Is welded construction employed for: Bedplate? yes Frames? yes Entablature? yes Is the crankcase separated from the

underside of pistons? no Is the engine of crosshead or trunk piston type? trunk Total internal volume of crankcase No. and total area of explosion relief

devices none Are flame guards or traps fitted to relief devices? no Is the crankcase readily accessible? yes If not, must the engine be removed for

overhaul of bearings, etc? no Is the engine secured directly to the tank top or to a built-up seating? built up How is the engine started? air

Can the engine be directly reversed? yes If not, how is reversing obtained?

Has the engine been tested working in the shop? How long at full power?

TANK & FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system ITOM State barred speed range(s), if imposed

Working propeller For spare propeller Is a governor fitted? yes Is a torsional vibration damper or detuner fitted to the shafting? yes

Where positioned? front & lower Type spring loaded No. of main bearings 11 Are main bearings of ball or roller

type? no Distance between inner edges of bearings in way of crank(s) Distance between centre lines of side cranks or eccentrics of opposed piston engines

Crankshaft type: Built, semi-built, solid. (State which) solid

Diameter of journals 8.0035 Diameter of crankpins Centre 6.745 Side Breadth of webs at mid-throw Axial thickness of webs

Shrunk, radial thickness around eyeholes Are dowel pins fitted? Crankshaft material Journals steel Pins 3.192 Minimum

Web Tensile strength

Diameter of flywheel Weight Are balance weights fitted? Total weight Radius of gyration

Diameter of flywheel shaft Material Minimum approved tensile strength

Flywheel shaft: separate, integral with crankshaft, integral with thrustshaft. (State which)

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MAIN GAS TURBINES. Name and Type No.

No. of sets of turbines Open or closed cycle BHP per set at RPM of output shaft

How is drive transmitted to propeller shaft?

ARRANGEMENT OF TURBINES. HP drives at RPM HP gas inlet temperature pressure

(A small diagram should be attached showing gas cycle.)

IP drives at RPM IP gas inlet temperature pressure

LP drives at RPM LP gas inlet temperature pressure

No. of air compressors per set Centrifugal or axial flow type? Material of turbine blades Material of compressor blades

No. of air coolers per set No. of heat exchangers per set How are turbines started?

How is reversing effected? Are the turbines operated in conjunction with free piston gas generators?

Total No. of free piston gas generators Diameter of working pistons Diameter of compressor pistons No. of double strokes per minute at full power

Gas delivery pressure Gas delivery temperature Have the turbines and attached equipment been tested working in the shop? How long at full power?

ELECTRIC PROPULSION (Reciprocating engines or gas turbines. Electrical particulars to be reported on Form 4d.)

No. of generators KW per generator at RPM AC or DC? Position

No. of propulsion motors SHP per motor at RPM Position

How is power obtained for excitation of generators? Motors?

REDUCTION GEARING (Reciprocating engines or gas turbines. A small line sketch should be attached showing arrangement of gearing.)

Is gearing of single or double helical type? If single, position of gear thrust bearing Is gearing of epicyclic type?

PCD of pinions: First reduction Second reduction PCD of wheels: First reduction Main

Material of pinions Tensile strength Material of wheel rims Tensile strength

Are gear teeth surface hardened? How are teeth finished? Diameter of pinion journals Wheel shaft journals

Are the wheels of welded construction? Is gearcase of welded construction? Has the wheel/gearcase been heat treated on completion of welding? Where is the propeller thrust bearing located? Are gear bearings of ball or roller type?

CLUTCHES, FLEXIBLE COUPLINGS, ETC. If a clutch or other flexible connection is fitted between engine/turbine and gearing or between engine and line shafting give brief description and, for clutches, state how operated. Torque converter-hydraulic

Can the main engine be used for purposes other than propulsion when declutched? no If so, what?

STRAIGHT SHAFTING. Diameter of thrustshaft 5" - 7" Material steel Minimum approved tensile strength

Shaft separate or integral with crank or wheel shaft? separate Diameter of intermediate shaft 5" Material steel

Minimum approved tensile strength Diameter of screwshaft cone at large end 5" Is screwshaft fitted with a continuous liner? no

Diameter of tube shaft. (If these are separate shafts) 5" Is tube shaft fitted with a continuous liner in way of stern tube no Thickness of screw/tube shaft liner at bearings 1/2" Thickness between bearings Material of screw/tube shaft steel Minimum approved tensile strength

Is an approved oil gland fitted? no If so, state type Length of bearing next to and supporting propeller 22 1/2"

Material of bearing rubber, cutlass In multiple screw vessels is the liner between stern tube and A bracket continuous? no If not, is the exposed length of shafting between liners readily visible in dry dock? yes except rubber covered

PROPELLER. Diameter of propeller Pitch Built up or solid solid Total developed surface

No. of blades 5 Blade thickness at top of root fillet Blade material bronze Moment of inertia of dry propeller

If propeller is of special design, state type yes, 5 blade Is propeller of reversible pitch type? no If so, is it of approved design?

State method of control Material of spare propeller none Moment of inertia

AIR COMPRESSORS & RECEIVERS. No. of main engine driven compressors per engine none Can they be declutched?

No. of independently driven air compressors. (State capacity, prime mover, position in ship, and Port and No. of certificate) two, 5 HP electric motors 600 psi

No. of starting air receivers. (Main and Aux. State capacity of each, position in ship and Port and No. of Certificate) four, no certificates, tested 900 psi hydrostatic

How are receivers first charged? compressor Maximum working pressure of starting air system 600 lbs. Are the safety devices in accordance with the Rules? yes Has the starting of the main engines been tested and found satisfactory? yes

COOLERS. No. of main engine fresh water coolers none No. of main engine lubricating oil coolers two

OIL FUEL TANKS. No. and position of oil fuel settling or service tanks not forming part of hull structure two day tanks, separate from hull

MAIN ENGINE DRIVEN PUMPS (No. and Purpose) one salt water pump, one fresh water pump, two lubricating oil pumps

INDEPENDENT PUMPS Name below essential pumps, state position and how driven. Give capacity of bilge pumps.	Service for which each pump is connected to be marked thus X										DELIVERY				
	Bilge Main	Bilge Direct	Ballast Main	Oil Fuel	Fresh Water Cooling	Sea	Feed Tanks	Lub. Oil	Boiler Feed	Salt Water Cooling	Fresh Water Cooling	Oil Fuel Tanks	Fire Main	Lub. Oil	Piston Cooling
Ballast. Electric		X	X			X									X overboard
Fire pumps, 2. Electric		X				X				X			X		X bilge eductors
FO transfer. Electric				X								X			X overboard
Lube oil transfer, 2 Electric								X						X	

BILGE SUCTIONS. No. and size in each hold, deep tank or pump room Lower hold, 2 4-inch suctions

No. and size connected to main bilge line in main engine room Iron 5 In tunnel

In aux. engine room Size and position of direct bilge suctions in machinery spaces one 4 inch

Forward part Size and position of emergency tilge suctions in machinery spaces four 2 inch eductors

Is the bilge or ballast system fitted with means for separating oily water on the overboard discharge side? no Do the piping arrangements comply with the Rules including special requirements for ships carrying petroleum in bulk, cargo oil or classed for navigation in ice? (strike out words not applicable).

STEAM & OIL ENGINE AUXILIARIES

Position of each	Type	Made by	Port and No. of Rpt. or Cert.	Driven Machinery (For electric generators, state output)
Main engine room, center, diesel	General Motors	No certificates	Generators 100 KW	

Is electric current used for essential services at sea? yes If so, state the minimum No. and capacity of generators required in order that the ship may operate at sea generator 100 KW

Is an electric generator driven by Main Engine? no

STEAM INSTALLATION. No. of donkey boilers burning oil fuel W.P. Type

Position No. of donkey boilers heated by exhaust gas only? W.P.

Is a superheater fitted? Are these boilers also heated by exhaust gas? Can the exhaust heated boilers deliver steam directly to the steam range or do they operate only as economisers in conjunction with oil fired boilers? Port and No. of report on donkey boilers

Is steam essential for operation of the ship at sea? Are any steam pipes over 3 ins. bore? If so, what is their material? For oil fired boilers is the arrangement of pipes, valves, controls, etc., in accordance with the Rules? No. of oil burning pressure units

No. of steam condensers No. of Evaporators

STEERING GEAR. (State No. and Type of Steam Engines, Electric Motors, Hydraulic Pumps and other particulars) one 2 HP electric motor operating rudders through gears and wire.

Have the Rule Requirements for fire extinguishing arrangements been complied with? Brief description of arrangements

Has the spare gear required by the Rules been supplied? Has all the machinery been tried under full working conditions and found satisfactory? yes Date and duration of full-power sea trials of main engines Oct. 21, 1961, 6 hours Does this machinery installation contain any features of a novel or experimental nature? (Give particulars)

The foregoing description of the main engine and installation is correct and the particulars are as approved for torsional vibration characteristics (strike out words not applicable).

Builder's Signature: John M. Supt. Builder
 Date: 0088212

GENERAL REMARKS

State if the machinery has been constructed and/or installed under special survey in accordance with the Rules, approved plans and Secretary's letters. State quality of materials and workmanship and give recommendations for classification, including any special notation to be assigned. Where existing machinery is submitted for classification the circumstances should be explained as fully as possible.

This vessel was constructed and equipped according to U.S. Navy specifications.

This vessel is eligible in my opinion to be classed 100A1 "Chilean Coastwise Service" with a record of ES 10.61 subject to satisfactory alteration of bilge pumping arrangements and satisfactory calibration of switchboard circuit breakers.

The machinery arrangements on this ship are similar to those of "ANGOCHE" (See New York Rpt. No. 84324).

Fred H. Hallbauer

Fred H. Hallbauer
Engineer Surveyor to Lloyd's Register of Shipping.

No certificates available

PARTICULARS OF IDENTIFICATION MARKS ((Including Port of origin) of important Forgings and Castings. (Copies of certificates should be forwarded with report.)

RODS

CRANKSHAFT OR ROTORSHAFT

FLYWHEEL SHAFT

THRUSTSHAFT

GEARING

INTERMEDIATE SHAFTS

SCREW AND TUBE SHAFTS

PROPELLERS

OTHER IMPORTANT ITEMS

Is the installation a duplicate of a previous case?

If so, state name of vessel

Date of approval of plans for crankshaft

Straight shafting

Gearing

Clutch

Separate oil fuel tanks

Pumping arrangements

Oil fuel arrangements

Cargo oil pumping arrangements

Air receivers

Donkey boilers

Dates of examination of principal parts:—

Fitting of stern tube

Fitting of propeller

Completion of sea connections

Alignment of crank shaft in main bearings

Engine chocks & bolts

Alignment of gearing

Alignment of straight shafting

Testing of pumping arrangements

Oil fuel lines

Donkey boiler supports

Steering machinery

Windlass

Date of Committee

Special Survey Fee

Decision

See Lnm 368

To be notified
later

Expenses

Date when A/c rendered

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