

Rpt. 4b

Date of writing report 17-1-59.

Received London 26 JAN 1959

Port of HONG KONG. No. 14664.

Survey held at Hong Kong.

In shops
No. of visits
On vessel 10.

First date 27-10-58. Last date 9-1-59.

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. Name "FIONETTA" Gross tons 131.
Owners International Molasses (Private) Ltd. Managers Pacific Islands S.B. Co., Ltd. Port of Registry Panama.
Hull built at Hong Kong. By Co., Ltd. Yard No. 237. When 1959. Jan.
Main Engines made at Frederikshavn, Denmark. By Alpha/Diesel A/S Eng. No. 8298 When 1957. Nov.
Gearing made at By
Donkey boilers made at By Blr. Nos. When
Machinery installed at Hong Kong. By Pacific Islands S.B. Co., Ltd. When 1959 Jan.
Particulars of restricted service of ship, if limited for classification Service in Rangoon Harbour.
Particulars of vegetable or similar cargo oil notation, if required Carrying Molasses and/or Oil F.P. above 150°F.
Is ship to be classed for navigation in ice? No. Is ship intended to carry petroleum in bulk? No.
Is refrigerating machinery fitted? No. If so, is it for cargo purposes? Type of refrigerant
Is the refrigerating machinery compartment isolated from the propelling machinery space? 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 wording 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 One No. of propellers One Brief description of propulsion system Through clutch & reverse gear.
MAIN RECIPROCATING ENGINES. Licence Name and Type No. B & W Alpha Type 343-F.
No. of cylinders per engine 3 Dia. of cylinders 200 m.m. stroke(s) 340 m.m. 2 or 4 stroke cycle 2 Single or double acting Single.
Maximum approved BHP per engine 165 at 450 RPM of engine and 450 RPM of propeller.
Corresponding MIP 5.65 Kg./cm² (For DA engines give MIP top & bottom) Maximum cylinder pressure 60 Kg./cm² Machinery numeral 33.
Are the cylinders arranged in Vee or other special formation? No. If so, number of crankshafts per engine

TWO STROKE ENGINES. Is the engine of opposed piston type? No. If so, how are upper pistons connected to crankshaft?
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 - two cylinder (Tandem) reciprocating, driven by crank.
No. of exhaust gas driven scavenge blowers per engine Nil. Where exhaust gas driven blowers only are fitted, can the engine operate with one blower out of action?
If a stand-by or emergency pump or blower is fitted, state how driven No. No. of scavenge air coolers Nil. Scavenge air pressure at full power 2.4 lbs.p.s.i. Are scavenge manifold explosion relief valves fitted? No.

FOUR 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?

TWO & FOUR STROKE ENGINES—GENERAL. No. of valves per cylinder: Fuel One. Inlet Nil. Exhaust Nil. Starting One Safety One.
Material of cylinder covers Cast Iron. Material of piston crowns Cast Iron. Is the engine equipped to operate on heavy fuel oil? No.
Cooling medium for :—Cylinders Salt Water. Pistons Nil. Fuel valves Nil. Overall diameter of piston rod for double acting engines

Is the rod fitted with a sleeve? Is welded construction employed for: Bedplate? No. Frames? No. Entablature? No. 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 One 3 3/4" dia. Are flame guards or traps fitted to relief devices? Yes. Is the crankcase readily accessible? Yes. If not, must the engine be removed for overhaul of bearings, etc? Is the engine secured directly to the tank top or to a built-up seating? Seating. How is the engine started? Compressed Air.
Can the engine be directly reversed? No. If not, how is reversing obtained? Clutch & reverse gear.

Has the engine been tested working in the shop? How long at full power?
CRANK & FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system See Secretary's letter 24-12-58. State barred speed range(s), if imposed
for working propeller For spare propeller Is a governor fitted? Yes. Is a torsional vibration damper or detuner fitted to the shafting? No.
Where positioned? Type No. of main bearings 4 Are main bearings of ball or roller type? No. Distance between inner edges of bearings in way of crank(s) 263 m.m. 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 140 m.m. Diameter of crankpins 130 m.m. Breadth of webs at mid-throw 220 m.m. Axial thickness of webs 70 m.m.
If shrunk, radial thickness around eyeholes Are dowel pins fitted? Crankshaft material Journals Pins Minimum Approved Tensile strength
Diameter of flywheel 930 m.m. Weight 550 Kg. 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) Integral with crankshaft.

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. **Manually operated disc clutch.**

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

STRAIGHT SHAFTING. Diameter of thrustshaft **110 m.m.** Material Minimum approved tensile strength
 Shaft separate or integral with crank or wheel shaft? **Separate.** Diameter of intermediate shaft **100 m.m.** Material
 Minimum approved tensile strength Diameter of screwshaft cone at large end **100 m.m.** Is screwshaft fitted with a continuous liner? **Yes.**
 Diameter of tube shaft. (If these are separate shafts) Is tube shaft fitted with a continuous liner in way of stern tube? Thickness of screwshaft liner at bearings **12 1/2 m.m.** Thickness between bearings **10 m.m.** Material of screwshaft **Steel** Minimum approved tensile strength
 Is an approved oil gland fitted? **Yes.** If so, state type **Cederwall.** Length of bearing next to and supporting propeller **400 m.m.**
 Material of bearing In multiple screw vessels is the liner between stern tube and A bracket continuous? If not, is the exposed length of shafting between liners readily visible in dry dock?

PROPELLER. Diameter of propeller **1150 m.m.** Pitch **770 m.m.** Built up or solid **Solid.** Total developed surface **505 m²**
 No. of blades **3** Blade thickness at top of root fillet **48 mm** Blade material **Bronze.** Moment of inertia of dry propeller **584 kg m²**
 If propeller is of special design, state type **No.** Is propeller of reversible pitch type? **No.** If so, is it of approved design?
 State method of control Material of spare propeller Moment of inertia

AIR COMPRESSORS & RECEIVERS. No. of main engine driven compressors per engine **One** Can they be declutched?
 No. of independently driven air compressors. (State capacity, prime mover, position in ship, and Port and No. of certificate) **One Ingersoll Rand 2 cyl. Type 30**
No. 42073 Capacity 8 cu.ft. per min. driven by aux. engine, E.R. (starboard).
 No. of starting air receivers. (Main and Aux. State capacity of each, position in ship and Port and No. of Certificate) **Main Two each 75 litres.**
Marked T.P. 60 ATM. WP 30 ATM. 9-11-57. 1762 ST 1763 ST Bureau Veritas Certificate No. 022
 How are receivers first charged? **Comp. driven by hand start** Maximum working pressure of starting air system **30 ATM.** 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 **Nil.** No. of main engine lubricating oil coolers **One.**
 OIL FUEL TANKS. No. and position of oil fuel settling or service tanks not forming part of hull structure **Bunkers Two in Engine Room, 1p. 1s.**
One service tank in engine room casing.
 MAIN ENGINE DRIVEN PUMPS (No. and Purpose) **One bilge (15 tons per hour). One S.W. cooling (15 tons per**
One lub. oil pump.

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											Over-board.
	Bilge Main	Bilge Direct	Ballast Main	Oil Fuel	Fresh Water Cooling	Sea	Feed Tanks	Lub. Oil	Boiler Feed	Salt Water Cooling	Fresh Water Cooling	Piston Cooling
G.S. pump (E.R. port)	X	X				X				X		X
20.6 T.P.H. Aux. Eng. Driven.												
O.F. Transfer pumps, 1p. 1s. hand.				X							X	

BILGE SUCTIONS. No. and size in each compartment. **Compartment Fore Peak, Forward Cofferdam and Steering Compartments**

all hand pumps. Pump room one 2" dia.
 No. and size connected to main bilge line in main engine room **one 2" dia.** In tunnel
 In aux. engine room Size and position of direct bilge suctions in machinery spaces **2" dia. (port).**
 Size and position of emergency bilge suctions in machinery spaces **2" dia. (starboard).**
 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). **Yes.**

STEAM & OIL ENGINE AUXILIARIES

Position of each	Type	Made by	Port and No. of Rpt. or Cert.	Driven Machinery (For electric generators, state output)
Engine Room (port)	4 SC SA	Southiron		Cargo Pump, G.S. pump,
Engine Room (stbd.)	Model P.D. 126	Works, Hong Kong.		Generator 1 KW.
				Cargo Pump.
				Air compressor.
		Port Engine No. D.58925846		
		Stbd. Engine No. D.58925729		

Is electric current used for essential services at sea? **No.** If so, state the minimum No. and capacity of generators required in order that the ship may operate at sea
 Is an electric generator driven by Main Engine? **No.**
 STEAM INSTALLATION. No. of donkey boilers burning oil fuel W.P. Type
 Position
 Is a superheater fitted? Are these boilers also heated by exhaust gas? No. of donkey boilers heated by exhaust gas only? W.P.
 Type Position 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) **Hand gear.**

Have the Rule Requirements for fire extinguishing arrangements been complied with? **Yes.** Brief description of arrangements **One hydrant with hose & jet/spray nozzle. Two 2 gall. foam extinguishers. 1 qt. C.T.C. 1 sand box and scoop.**
 Has the spare gear required by the Rules been supplied? **Yes.** Has all the machinery been tried under full working conditions and found satisfactory? Date and duration of full-power sea trials of main engines **23-12-58. 4 hours.** Does this machinery installation contain any features of a novel or experimental nature? (Give particulars) **No.**

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).

PACIFIC ISLANDS SHIPBUILDING CO., LTD.

Lloyd's Register Foundation

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.

The main engines of this vessel were constructed under survey by Bureau Veritas surveyors.

The Machinery of this vessel has been installed under Special Survey at this Port, in accordance with the approved plans and Secretary's letters.

The workmanship is good.

Hyd. ltr 7/4/59 On completion of installation the Machinery was examined under working conditions including the reversible propellers, found satisfactory, and in my opinion, is eligible to be classed as contemplated when the torsional vibration characteristic have been approved.

Documents forwarded herewith

Interim Certificate B.1.

Makers Test sheets on auxiliary engines.

Bureau Veritas Certificates on Main Engines, Screw shaft, Intermediate Shaft, Propeller, sterntube & Air Receivers.

James A. Anderson
James A. Anderson
Engineer Surveyor to Lloyd's Register of Shipping.

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

RODS

CRANKSHAFT ~~OR ROTOR SHAFT~~ ✓ 3701 12-10-57. S.T.

FLYWHEEL SHAFT

THRUST SHAFT ✓ 4517 12-10-57. S.T.

GEARING

INTERMEDIATE SHAFTS ✓ 5077 - 4 12-11-57. S.T.

SCREW ~~AND TUBE~~ SHAFTS ✓ 5077 - 4 12-11-57. S.T.

PROPELLERS ✓ 12-11-57. S.T.

OTHER IMPORTANT ITEMS

Is the installation a duplicate of a previous case? No.

If so, state name of vessel

Date of approval of plans for crankshaft 24-12-58. Straight shafting 24-12-58. Gearing - Clutch -
Hong Kong 5-9-58. 9-9-58.

Separate oil fuel tanks Pumping arrangements 16-10-58. Oil fuel arrangements 16-10-58.

Cargo oil pumping arrangements 16-10-58. Air receivers - Donkey boilers -

Dates of examination of principal parts:-

Fitting of stern tube 14-11-58. Fitting of propeller 20-11-58. Completion of sea connections 12-11-58. Alignment of crankshaft in main bearings -

Engine chocks & bolts 4-12-58. Alignment of gearing - Alignment of straight shafting 4-12-58. Testing of pumping arrangements 23-12-58.

Oil fuel lines 23-12-58. Donkey boiler supports - Steering machinery Gear 23-12-58. Windlass 23-12-58.

Date of Committee THURSDAY 5 MAR 1959

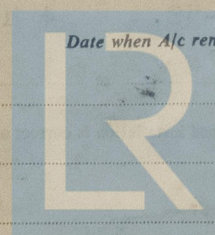
Decision

See Rpt. 1

Special Survey Fee \$448.00 ✓
Instaln. 640.00 ✓

Expenses \$21.00

Date when A/c rendered 9th January, 1959.



Lloyd's Register
Foundation