

3-JUL 1956

Rpt. 9

Date of writing report 26th June 1956

Received London

Port ALEXANDRIA

No. 4812

Survey held at ALEXANDRIA

No. of visits 20

First date 18th Oct. 55

Last date 10th June 1956

REPORT OF PERIODICAL SURVEYS & REPAIRS OF MACHINERY

No. in R.B. 19577 Name ^{S.S.} "MECCA" Gross tons 8252 Date of build 4-1929
 Owners Khedivial Mail Line S.A.E. Managers --- Port of Registry ALEXANDRIA
 Engines made Birkenhead By Cammell Laird & Co. Ltd. Type 4 steam turbines SR geared to 2 screwshafts.
 No. of Main Engines 2 No. of Screws 2
 No. of Main Boilers 4 W.P. 220 lbs. Records of Survey & Special Notations as per Register Book
 No. of Aux./Donkey Boilers --- W.P. ---

Surveyed Afloat or in Dry Dock BOTH
 Nature of Survey LMC, BS, TS & DAMAGE
 Was Damage Report issued? --- Int. Cert.? Yes
 Last Report (For Head Office only)

Hull	Machinery
+ 100A1 with freeboard	+ LMC (CS) 11/51
Docking 5/55	BS 6/55
S.S. Mtl. 7/51	TS (CLp&s) 2/53

The condition of any of the following items is to be described as "good" only when the part has been examined, found or placed in good condition, and is considered to be acceptable until the due date of the next Periodical Examination. Where it is considered that re-examination or repairs should be effected before the due date of the next Periodical Examination a distinguishing mark thus † should be inserted against the item and the circumstances and action recommended described fully under "defects and repairs". At part or complete Special Surveys those items which are not applicable to the ship should be cancelled with a black line; this need not be done when the machinery is on a continuous survey basis. When any part has been subjected to pressure test this should be stated. Engine parts when referred to by numbers should be counted from forward.

DOCKING Propellers GOOD Wear Down of Stern Bushes P 5/32" S 3/32" Oil Glands --- Sea Connections GOOD
 Fastenings GOOD Has Screwshaft ~~Tubular~~ been drawn? Yes Date of Examination P&S 2/4/56 Has Shaft been changed? No
 Has Shaft now fitted been previously used? --- Has Shaft now examined ~~with~~ a continuous liner? Yes Approved oil gland? ---

MAIN ENGINES (Recip. Steam or I.C.) PORT STARBOARD

1 Cyls., Covers, Pistons & Rods
 2 Valves & Gears
 3 Connecting Rods, Top Ends & Guides Side Centre
 4 Crankpins & Bearings Side Centre
 5 Journals & Bearings

MAIN ENGINE DRIVEN AIR COMPRESSORS
 6 Cyls., Covers, Pistons & Rods
 7 Connecting Rods & Top Ends
 8 Crankpins & Bearings
 9 Journals & Bearings

MAIN ENGINE DRIVEN SCAVENGE PUMPS
 11 Cyls., Covers, Pistons & Rods
 12 Connecting Rods & Top Ends
 13 Crankpins & Bearings
 14 Journals & Bearings
 15 Levers

SCAVENGE BLOWERS
 17 SUPERCHARGERS

MAIN TURBINES
 18 Casings, Rotors, Blading, Bearings & Thrusts GOOD GOOD

19 EXHAUST STEAM TURBINES (WITH RECIP. ENGINES) --- ---
 20 STEAM COMPRESSORS --- ---
 21 CLUTCHES & HYDRAULIC COUPLINGS --- ---
 22 REDUCTION GEARING GOOD GOOD
 23 THRUST BLOCKS, SHAFTS & BEARINGS GOOD GOOD
 24 INTERMEDIATE SHAFTS & BEARINGS GOOD GOOD
 25 HOLDING DOWN BOLTS & CHOCKS GOOD GOOD
 26 CONDENSERS (MAIN & AUX.) GOOD (Tested) GOOD (Tested)
 27 STEAM RE-HEATERS --- ---
 28 DE-SUPERHEATERS --- ---
 29 STOP & MANOEUVRING VALVES GOOD GOOD
 30 MAIN ENGINE DRIVEN PUMPS --- ---
 31 CRANKCASE DOORS & EXPLOSION RELIEF DEVICES --- ---
 Have Main Engines been tested working and manoeuvring? Yes

OPINION OF MACHINERY AND RECOMMENDATIONS
 The Machinery of this vessel is in good and safeworking condition and eligible, in my opinion, to remain as classed, with fresh record of + LMC 6,56 (including boilers) and T.S. (CL) 4,56.

Date of Committee THURSDAY 3 SEP 1956
 Decision + LMC CS 6.56
 Both S 4.56

Engineer Surveyor to Lloyd's Register of Shipping
 Lloyd's Register Foundation
 012423-012430-0150 1/4

If so, is the Report sent now, or when will it be sent?

If certificate is required state where to be sent YES. This Office.

32 Essential Independent Pumps (Identify by position) ALL - GOOD

33 Bilge, Ballast & Oil Fuel Suction Lines, Fittings & Controls GOOD

34 Have the remaining Piping Arrangements & Fittings in the machinery space been examined as considered necessary? Yes

35 Fresh Water Coolers --- 36 Lub. Oil Coolers GOOD 37 Heaters (state service) Feed and oil fuel - GOOD (Tested)

38 Independent Air Compressors, Coolers & Safety Devices --- 39 Heaters (state service) ---

39 Air Receivers & Safety devices—Main --- 40 Auxiliary ---

41 Oil Fuel Tanks (Not forming part of hull structure) ---

42 Evaporators GOOD 43 Have Evaporator Safety Valves been tested under steam? Yes

44 Steering Machinery GOOD 45 Windlass GOOD 46 Fire Extinguishing Arrangements GOOD

AUXILIARY ENGINES (Identify by position)

PROPULSION	PORT	STARBOARD	ELECTRICAL EQUIPMENT	AUXILIARY EQUIPMENT
Generators			Generators & Governors	GOOD
Exciters			Motors	GOOD
Air Coolers			Switchboards & Fittings	GOOD
Motors			Circuit Breakers	GOOD
Air Coolers			Cables	GOOD
Control Gear, Cables, etc.			Insulation Resistance	GOOD
Insulation Resistance			Steering Gear Generators and Motors	--
Insulating Oil Test			Navigation Light Indicators	GOOD
Overspeed Governors				
Magnetic Couplings				
Air Gap				

BOILERS OPENED UP & EXAMINED (Identify by position and state latest date of internal examination of each boiler)

MAIN ALL FOUR 16th May 1956 - GOOD

AUXILIARY, DONKEY or PRESS

Superheaters GOOD (Tested)

Safety Valves GOOD

Mountings, Doors & Fastenings GOOD

Safety Valves Adjusted to Sat. 220 lbs. per sq. inch.
Spt. 225 lbs. per sq. inch.

Boiler Securing Arrangements GOOD

Main Economisers -- Exhaust Gas Heated Economisers --

Steam Heated Steam Generators -- Steam Generator Safety Valves Adjusted to --

Were Oil Burning System & Remote Controls examined working in accordance with Rules? Yes Forced Circulating Pumps GOOD

Have Saturated Steam Pipes in cylindrical boiler smoke boxes been examined as required by Rules? Yes Funnel GOOD

EXAMINATION & TESTING OF STEAM PIPES (State material)

Main Steel - GOOD

Auxiliary (over 3 in. bore) Steel - Good

Were Copper Pipes annealed? --- Have Saturated Pipes in cylindrical boiler smoke boxes been tested? Yes

PARTICULARS OF DEFECTS & REPAIRS, ETC. (Damage repairs should be detailed separate from wear and tear repairs; state what action has been taken regarding items which are subjects of class)

DAMAGE stated to have been caused by (1) fracturing of Starboard forward Turbo generator impeller retaining nut on the 15th September 1955 whilst on passage from Suez to Djeddah, and (2) vessel stranding on Erg Ryah Reef, Tor, in the Red Sea on 13th September 1955. For further details please see Damage Reports attached (D 658/9).

DAMAGE REPAIRS EFFECTED:-

Damage (1) Starboard forward turbo generator, spare rotor now fitted, examined under working conditions, and trip gear tested, with satisfactory results.

Damage (2) Port propeller, 2 spare blades fitted, two remaining blades heated, faired and repitched.

Starboard propeller, 2 spare blades fitted, two remaining blades heated, faired and repitched.

Both screwshafts drawn for examination, found satisfactory.

LMC (including Boilers)

REPAIRS EFFECTED:-

All main turbines show fairly heavy corrosion internally, the port HP and LP being worse than the starboard sets, but all are considered efficient.

Port HP turbine rotor and bearings sent to Genoa for complete overhaul and replaced on board.

Port HP casing dummy packing renewed.

Starboard HP and Port & Starboard L.P. rotor bearings remounted.

Starboard HP rotor packing renewed.

Survey fees	LMC	£ 110.-
	TS	16.-
	ELECT.	30.-
	BS	48.-
	Repairs	100.-
Damage fee (1)		25.- expenses £ 2.-
" " (2)		30.- " £ 2.500
Expenses... (Owners)		15.-
	S.A.F.	14.-

Date when A/c Rendered 29th June 1956

Rpt. 9a 8-JUL 1956

Port of ALEXANDRIA Continuation of Report No. 4812 dated 26th June 1956 on the S.S. "MECCA"

Port Main Circulating Pump.
Water end, impeller shaft renewed. Casing machined in way of sealing rings and sealing rings renewed. Lignum vitae bearings renewed. Rotary gland renewed.

Starboard Main Circulating Pump. Water end, impeller shaft renewed. Casing machined in way of sealing rings and sealing rings renewed. Lignum vitae bearings renewed. Rotary gland renewed.

Port Main Air Pump. Rings and sealing rings renewed. Engine, piston rings renewed, piston rod skimmed, metallic packing adjusted to suit. Spare steam valve chest complete fitted. Water end, ebonite rings renewed. All kinghorn valves renewed. Lever gear pins and bushes renewed.

Lubrication oil pumps.
Port, centre & Starboard:- All steam and oil end piston rings renewed. Starboard pump, spare steam valve chest fitted.

Auxiliary Circulating Pump.
Engine, cylinder rebored, piston and rings renewed, piston rod skimmed, neck and gland bushes to suit.

Auxiliary Air Pump.
Engine, piston grooves machined and piston rings renewed. Spare steam valve chest fitted. Water end, all kinghorn valves and ten studs renewed, ebonite bucket rings renewed. Link gear pins and bushes renewed.

Main Feed Pumps, Port & Starboard.
Steam end, piston grooves machined and new rings fitted. Piston rods skimmed, neck rings renewed and glands rebushed. Valve gear overhauled and steam chest valves renewed. Water end, piston grooves machined and ebonite rings renewed. All suction and delivery valves renewed.

Bilge Pump. Steam end, piston rings renewed, pins and bushes of link motion renewed, piston rods skimmed, neck ring renewed and gland rebushed. Water end, ebonite rings renewed, rods skimmed, neck ring renewed and gland rebushed. All kinghorn valves and springs renewed and seats machined.

General Service Pump.
Steam end, piston rings renewed, pins and bushes of link motion renewed. Rods skimmed, neck rings renewed and glands rebushed. Water end, both bronze liners renewed, piston grooves machined, ebonite rings renewed, all kinghorn valves renewed, two valve chest covers renewed.

Oil Bilge Pump.
Steam end, piston and rod machined, piston rings renewed, neck ring renewed and gland rebushed. Link motion pins and bushes renewed. Water end, piston and rod machined, ebonite rings renewed, neck ring renewed and gland rebushed.

Auxiliary Feed Pump.
Steam cylinder rebored, piston and rod renewed. Steam gland renewed. Link gear rebushed. Steam and water end rings renewed.

Oil Fuel Transfer Pump.
Piston rings renewed, oil and steam.

Ballast Pump.
Valve gear overhauled with new pins and bushes. Steam and water end piston rings renewed. Kinghorn valves all renewed.

Port Fan Engine.
Cylinder and valve chest rebored, valve and piston renewed. Main bearings and crankpin bearing remounted. Top end bearing remounted, piston rod renewed, valve rod renewed.

Centre Fan Engine.
Piston valve renewed. Cylinder and valve chest machined. Piston and rings renewed. Piston rod machined, neck ring renewed and gland rebushed.

Starboard Fan Engine.
Crankshaft skimmed, all bearings remounted. Cylinder and valve chest rebored, piston and valve renewed. Piston rod and valve rod machined, neck rings renewed and glands rebushed.

Auxiliary Condenser. C.I. Division plate on door machined and mild steel make up piece Electric fitted with C.S.K. tap bolts.

Circuits, switches, plugs, motors, generators throughout vessel megger tested, repaired or renewed as necessary and remegger tested on completion and left in good order.

Starboard Forward Boiler.
Tubes renewed:- 36 in port upper box, 32 in port lower box, 17 in starboard lower, and 22 in starboard upper box. Remainder of tubes expanded. 12 stay tube nuts renewed. All superheater elements cleaned and tested. All mountings overhauled as necessary and placed in good order. Boiler hydraulically tested on completion.

Starboard After Boiler.
Tubes renewed:- 48 in starboard upper box, 25 in starboard lower, 26 in port lower and 18 in port upper. Remainder of tubes expanded. 10 stay tube nuts renewed. 2 combustion chamber stays renewed. All superheater elements cleaned and tested. All mountings overhauled as necessary. Boiler hydraulically tested on completion.

Port Forward Boiler.
15 stay tubes renewed. 36 plain tubes renewed. 6 stay tube nuts renewed. 5 combustion chamber stays renewed. 25 stay nuts renewed.



Port After Boiler.

20 plain tubes renewed.
11 c.c. stay bolts renewed.
21 c.c. stay nuts renewed.
All superheater elements cleaned and tested.
All mountings overhauled as necessary.
All boilers hydraulically tested on completion.

Other minor repairs effected.



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