

m/s "MAZORCA"

A number of rivets in wing tanks aft, and fuel oil tanks forward to be renewed.

Total number of rivets in all main cargo tanks, fuel oil tanks, cofferdams, pump room and fore peak tank, about 93000 rivets I 1/8" to 3/4".

Angle shoes in way of centre, line bulkhead, lower part to be taken off, plates to be cleaned and scraped, holes reamed and shoes dressed up and refitted or renewed.

The holes elsewhere to be reamed in all cases where the rivets are very slack.

After completion of repairs, all the tanks and cofferdams to be tested in drydock. Bottom and sides to be sufficiently shored during testing.

Any broken and removed cementing to be made good.

The main cargo pipe line to be tested by water pressure.

Heating coils to be partly removed for access and refitted

Main top mast to be renewed.

MACHINERY

Port main motor to be opened, cylinders, compressors and upper crank cases to be disconnected and taken out. Silencer to disconnect and remove.

Circulating and bilge to be opened and disconnected from crank shaft.

All water, oil and lubricating pipes to be removed and carefully marked.

Crank shaft to be lifted and taken ashore and examined in lathe. Balance weights to be tested.

Bed plate to be renewed.

All main bearings and thrust bearing to be remetalled.

Screw shaft to be drawn for examination, and lower half of lignum vitae to be renewed.

Screw thrust and crank shaft to be lined up.

Bearing in way of intermediate shaft to be adjusted and fastened to seating.

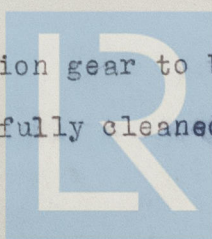
The clutch to be disconnected taken ashore and outer and inner barrel to be skimmed off in lathe. Levers and brackets in the clutch to be reamed and new bolts to be fitted where necessary.

Crank pins bearings to be remetalled.

The upper crank cases, cylinders and silencers to be refitted and connected up.

All bearings and motion gear to be refitted and adjusted

All pipes to be carefully cleaned and refitted.



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Starboard main motor to be opened, cylinders compressors and upper crank cases to be disconnected and taken out. Silencers to be disconnected and removed.

Circulating and bilge pumps and washing gear to be disconnected and removed. All water oil, and lubricating pipes to be removed and carefully marked.

The clutch to be disconnected, taken ashore and outer and inner barrel to be skimmed off in lathe. Levers and brackets in the clutch to be reamed and new bolts to be fitted where necessary.

Crank shaft to be lifted, and main and thrust bearings to be remetalled.

Screw shaft to be drawn for examination and the lower half of lignum vitae to be renewed.

Screw, intermediate, thrust and crank shafts to be refitted and lined up.

Crank bearings to be remetalled. Cylinders, crank cases silencers to be refitted.

All bearing and motion gear to be refitted and adjusted.

All pipes to be carefully cleaned and fitted.

Port and Starboard motors to be tried under full speed for six hours.

Electric light installation to be overhauled and tested. Wires to mast heads side lights and after light to be partly renewed.

All docking, undocking expenses to be included.

All crane expenses, staging, shoring, lighting, filling of tanks for testing to be included.

All work to be carried out to the satisfaction of Lloyd's Register of Shipping Surveyor.

All removals necessary in order to carry out the above recommendations to be afterwards replaced and made good with part new material.

Istanbul the 28th December 1933



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## D A M A G E   R E P O R T

### m/s "MAZORCA"

This is to certify that Mr. E. C. Silley appointed by Th. Reppen, Underwriters Representative, and Mr. Ludv. C. A. Lystad, appointed by the Owners, have surveyed the motor vessel "MAZORCA" of callao, Peru, 2466 tons gross, whilst lying at anchor off Kabatash, lower Bosphorus, and also in Drydock, for the purpose of ascertaining the nature and extent of damage stated to have been sustained through heavy weather whilst on voyage from La Mede to Constanza in ballast in December 1933.

Leakage was found in all main cargo tanks and cofferdams and a great number of rivets found slack.

#### TRANSVERSE BULKHEADS

In all tanks rivets in boundary angle bars at shell and bulkheads, brackets, to vertical stiffeners, connection of side girders to transverse bulkheads, horizontal and vertical stiffeners and corner brackets to upper and lower side stringers found slack.

Bulkhead plating was found bulged in bulkheads Nos. 2, 3 & 5 from Pump Room.

#### SIDE GIRDERS

In all tanks rivets in two side girders, intercostal connecting angles to shell slack and partly leaking.

#### LONGITUDINAL BULKHEADS

A large number of rivets in connecting angles from transverse bulkheads, brackets from girders and bottom plating slack and partly leaking.

A number of rivets in vertical boundary angles to longitudinal bulkheads slack and leaking especially in the lower portion in the shoes.

Rivets in bottom angles of longitudinal bulkheads and shell slack in many places.

Rivets in connections to strong beams upper and lower to longitudinal bulkheads very slack.

A great number of rivets in vertical stiffeners on longitudinal bulkheads found slack.

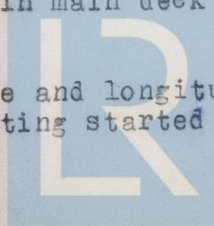
#### SHIP'S SIDE

A large number of rivets in transverse framing especially from side girders to above upper stringer found slack and partly leaking.

A large number of rivets in side stringers including shell angles and face bars of upper and lower stringer and brackets to horizontal stiffeners on transverse bulkheads and connections to strong beam very slack.

A number of rivets in main deck beams and beam knees to main frame slack.

Rivets in transverse and longitudinal bulkhead seams and butts, and seams of shell plating started in a number of places.



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SHIP'S SIDE (contd)

A number of rivets in transverse frames to shell, transverse bulkhead, lower brackets to shell, and intercostal connecting angles to shell broken.

TRANSVERSE FRAMES

Seventeen frames in tanks Nos. 3, 4 & 5, Port and Starboard side found cracked.

Rivets in trunk stiffeners slack in places.

Rivets in middle stringer and in one panting beam connection slack in places.

FUEL TANKS

Double bottom tanks in fore hole and wing tanks aft on each side of Donkey Boiler recess found leaking and considerable leakage from wing tanks after cofferdams.

Rivets in bulkheads of fore and after cofferdam pump room leaking in places.

Wood deck under windlass strained and leaking badly.

Main top mast found slack in the socket.

MACHINERY

The two main motors have been tried under working conditions and found badly shaken with considerable damage to main bearings, clutches and reversing gear. Lower half of crank case of port motor found broken and intermediate shaft bearing started and rivets in engine seating slack.

The main bearings found damaged through overheating.

Port crank shaft found scored.

In order to place the vessel in the same condition as she was before the damage was sustained, we recommend the following repairs carried out:-

Vessel to be drydocked, bottom to be cleaned and painted two coats, bootopping to be painted one coat.

Twelve main cargo tanks to be cleaned and made gas free and certificate for being gas free to be supplied.

The two fore fuel oil tanks and two wing tanks aft and two bottom tanks under engine to be emptied of oil (about 50 tons) steamed and cleaned and made gas free. Two cofferdams to be cleaned and made gas free. The oil to be stored in tanks or barrels, and refilled in the tanks after completion of repairs.

Fore peak tank to be opened and cleaned.

Tank top in way of engine room to be cleaned and engine seating to be properly cleaned for examination of same.

Tween decks to be cleaned for examination.

All twelve main cargo tanks, six fuel oil tanks and fore peak tank to be tested with water pressure, and all leaky rivets in way of bulkheads and shell to be marked.



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MACHINERY (contd)

Ship sides and bottom to be properly shored during testing.

Rudder to be lifted, rudder quadrant to be removed and the rudder taken ashore and tried for truth and refitted.

Four gudgeons to be rebushed.

Steering gear and engine to be opened for examination.

Windlass to be removed, and the wooden seating in way of same, to be renewed, caulked and pitched, and the windlass to be refitted.

Wood ceiling in way of crew space to be partly removed for access and refitted.

Slack rivets in middle side stringer, and panting beam knee port side in way of fore peak to be renewed.

MAIN CARGO TANKS

Boundary bar connecting bulkhead to shell plating in all tanks and to bulkhead at fore end wing tank, Port & Starboard to be removed (from deck to centre keelson) plating to be carefully cleaned and scraped and new angle bars fitted. Holes to be reamed and countersunk. Sixteen angle bars about 40 feet 5"x5" double riveted to bulkhead and shell.

Angle bars to be fitted in two pieces and welded in way of butts.

Side stringers to be removed for access. Two main frames port side and one starboard side in No. 3 tank to be renewed.

Seven frames on port side and one starboard in No. 4 tank, five frames port and one starboard in No. 5 tank to be renewed from centre line bulkhead to deck. Frames about 40 feet 5 1/2"x3 1/2"x10/20".

Frames to be fitted in two pieces and electric welded in the butts.

No. I TANK-STARBOARD SIDE

One bulkhead plate in way of lower horizontal stiffener (after bulkhead) to be partly cut adrift, faired in place and reriveted and caulked.

No. III TANK-PORT SIDE

Two bulkhead plates to fore bulkhead to be partly cut adrift, faired in place and reriveted and caulked.

No. 4 TANK-PORT SIDE

One bulkhead plate in way of ship's side after bulkhead to be removed faired and refitted at 16'0"x4'6"x9/20". Two vertical stiffeners to be removed for access and refitted.

About 20% of all the rivets in No. 1 and 6 tanks port and starboard sides require to be renewed.

About 50% of all the rivets in Nos. 2, 3, 4 & 5 tanks to be renewed.