

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

21 MAY 1948

Date of writing Report... 12th MAY 1948... When handed in at Local Office... 18 MAY 1948... Port of... NEWCASTLE-ON-TYNE

No. in Survey held at... HEBBURN-ON-TYNE... Date, First Survey... 3rd FEBRUARY 1948... Last Survey... 12th MAY 1948... Reg. Book... 38688... on the... M.V. "LABIOSA"...

Tons { Gross... 6473.36... Net... 3604.00... Built at... NEWCASTLE-ON-TYNE... By whom built... HAWTHORN LESLIE & CO. LTD... Yard No... 692... When built... 1948...

Owners... ANGLO-SAXON PETROLEUM CO. LTD... Port belonging to... LONDON... Electrical Installation fitted by... HAWTHORN LESLIE & CO. LTD... Contract No... -... When fitted... 1948...

Is vessel fitted for carrying Petroleum in bulk... YES... Is vessel equipped with D.F... YES... E.S.D... YES... Gy.C... YES... Sub.Sig... -...

Have plans been submitted and approved... YES... System of Distribution... TWO WIRE - INSULATED... Voltage of supply for Lighting... 110...

Heating... -... Power... 110... Direct or Alternating Current, Lighting... D.C... Power... D.C... If Alternating Current state periodicity... -... Prime Movers,

has the governing been tested and found as per Rule when full load is suddenly thrown on and off... YES... Are turbine emergency governors fitted with a

trip switch as per Rule... -... Generators, are they compound wound... YES... are they level compounded under working conditions... YES...

if not compound wound state distance between generators... -... and from switchboard... -... Where more than one generator is fitted are they

arranged to run in parallel... No... are shunt field regulators provided... YES... Is the compound winding connected to the negative or positive pole

NEGATIVE... Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing... -... Have certificates of

test for machines under 100 kw. been supplied... YES... and the results found as per rule... YES... Are the lubricating arrangements and the construction

of the generators as per rule... YES... Position of Generators... IN ENGINE ROOM... is the ventilation in way of generators satisfactory... YES... are they clear of inflammable material... YES... if situated

near unprotected combustible material state distance from same horizontally... -... and vertically... -... are the generators protected from mechanical

injury and damage from water, steam and oil... YES... are the bedplates and frames earthed... YES... and the prime movers and generators in metallic

contact... YES... Switchboards, where are main switchboards placed... NEAR GENERATORS... are they in accessible positions, free from inflammable gases and acid fumes... YES... are they protected from mechanical injury and damage from water, steam

and oil... YES... if situated near unprotected combustible material state distance from same horizontally... -... and vertically... -... what insulation

material is used for the panels... INTEROHM... if of synthetic insulating material is it an Approved Type... YES... if of

semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule... -... Is the frame effectually earthed... YES...

Is the construction as per Rule... YES... including accessibility of parts... YES... absence of fuses on the back of the board... YES... individual fuses

to pilot and earth lamps, voltmeters, etc... YES... locking of screws and nuts... YES... labelling of apparatus and fuses... YES... fuses on the "dead"

side of switches... YES... Description of Main Switchgear for each generator and arrangement of equaliser switches... DOUBLE POLE QUICK BREAK

SWITCH WITH A FUSE ON EACH POLE... and for each outgoing circuit... DOUBLE POLE CHANGEOVER SWITCH WITH A FUSE ON EACH POLE...

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule... YES... Instruments on main switchboard... 2...

ammeters... 2... voltmeters... -... synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection... -... Earth Testing, state means provided... EARTH LAMPS... Switches, Circuit Breakers and Fuses, are they as per Rule... YES... are the fuses an approved type... YES... are all fuses labelled as

per Rule... YES... If circuit breakers are provided for the generators, at what overload current did they open when tested... -... are the reversed current

protection devices connected on the pole opposite to the equaliser connection... -... have they been tested under working conditions, and at what current

did they operate... -... Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule... YES...

Cables, are they insulated and protected as per the appropriate Tables of the Rules... YES... if otherwise than as per Rule are they of an approved type... -...

state maximum fall of pressure between bus bars and any point under maximum load... 4 VOLTS... are the ends of all cables having a sectional area of 0.04

square inch and above provided with soldering sockets... YES... Are paper insulated and varnished cambric insulated cables sealed at the ends... YES...

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with insulating compound. or waterproof insulating tape. ☒ Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage. ☒ Are cables laid under machines or floorplates. ☒ if so, are they adequately protected. ☒ Are cables in machinery spaces, galleys, laundries, etc., lead covered. ☒ or run in conduit. ☒ State how the cables are supported and protected. MAINS - LEAD COVERED ARMOURD AND BRAIDED CLIPPED TO STEEL TRAY ☒

ACCOMMODATION CABLES - LEAD COVERED CLIPPED TO WOOD GROUNDS ☒

Are all lead sheaths, armouring and conduits effectually bonded and earthed. ☒ Refrigerated chambers, are the cables and fittings as per Rule. ☒

Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands. ☒ where unarmoured cables pass through beams, etc., are the holes effectively bushed. ☒ and with what material. LEAD ☒ Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule. ☒ Emergency Supply, state position. ☒

and method of control. ☒

Navigation Lamps, are they separately wired. ☒ controlled by separate double pole switches. ☒ and fuses. ☒ Are the switches and fuses in a position accessible only to the officers on watch. ☒ is an automatic indicator fitted. ☒ Secondary Batteries, are they constructed and fitted as per Rule. ☒ are they adequately ventilated. ☒

what is the battery capacity in ampere hours. ☒

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof. ☒ Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present. ☒ if so, how are they protected. ☒

"WIGAN" FLAMEPROOF FITTINGS INSTALLED IN TWEEN DECK SPACE CENTRE CASTLE ☒

and where are the controlling switches fitted. IN OFFICER'S ACCOMMODATION ALLEYWAY ☒ are all fittings suitably ventilated. ☒

are all fittings and accessories constructed and installed as per Rule. ☒ Searchlight Lamps, No. of ONE ☒ whether fixed or portable. ☒

PORTABLE ☒

are their fittings as per Rule. ☒ Heating and Cooking, is the general construction as per Rule. ☒

are the frames effectually earthed. ☒ are heaters in the accommodation of the convection type. ☒ Motors, are all motors constructed and installed as per Rule. ☒ and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil. ☒ if situated near unprotected combustible material state minimum distance from same horizontally. ☒ and vertically. ☒ Are motors coupled to oil fuel transfer and unit pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment. ☒

Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing. ☒ Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rule. ☒ Control Gear and Resistances, are they constructed and fitted as per Rule. ☒ Lightning Conductors, where required are they fitted as per Rule. ☒ Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships been complied with. ☒ are all fuses of the cartridge type. ☒

are they of an approved type. ☒ Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships. ☒ Are the cables lead covered as per Rule. ☒ Spare Gear, if the vessel is for open sea service have spares been provided as per Rule. ☒ are they suitably stored in dry situations. ☒ Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory. ☒

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	1	30	110	273		DIESEL ENGINE.	OIL	ABOVE 150°F.
	1	30	110	273		STEAM ENGINE.		
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	30	1	37-083	273	296	30	V.C.	L.C.A.B.
" " EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.		CONDUCTORS.		MAXIMUM CURRENT IN AMPERES..		APPROX. LENGTH (lead plus return feet).	INSULA- TED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS								
ENGINE ROOM MOTORS.	S.B. 4.	1	19-064.	83.4✓	135	240	V.C.	L.C.A.B.
ENGINE & BOILER ROOMS LIGHTING.	S.B. 3.	1	19-052.	47.7✓	104	60	V.C.	L.C.A.B.
MIDSHIP SWITCHBOARD		1	37-103.	124✓	385	555	V.C.	L.C.A.B.
CREW ACCOMMODATION LIGHTING	S.B. 2.	1	19-064.	34.6✓	135	180	V.C.	L.C.A.B.
" " "	S.B. 5	1	19-052.	39.3✓	104	210	V.C.	L.C.A.B.
MIDSHIPS ACCOMMODATION Ltg.	S.B. 1	1	19-064.	116.6✓	135	42	V.C.	L.C.
SUEZ PROJECTOR.		1	19-052	50✓	104	500	V.C.	L.C.A.B.
Gyro COMPASS.		1	7-036	9✓	24	42	V.I.R.	L.C.
SHORE CONNECTION BOX		1	37-072	-	246	-	V.C.	L.C.A.B.

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS		1	19-064	30	135	120	V.C.	L.C.
NAVIGATION LIGHTS		1	7-026	5.8	24	120	V.I.R.	L.C.
LIGHTING AND HEATING ENGINE & BOILER ROOMS D.B. 10		1	7-029	9	15	120	V.I.R.	L.C.A.B.
ENGINE & BOILER ROOMS LIGHTING	D.B. 11	1	7-036	9	24	180	V.I.R.	L.C.A.B.
" " " "	D.B. 12	1	7-029	8.2	15	120	V.I.R.	L.C.A.B.
" " " "	D.B. 13	1	7-036	10.9	24	180	V.I.R.	L.C.A.B.
" " " "	D.B. 14	1	7-029	6.2	15	30	V.I.R.	L.C.A.B.
" " " "	D.B. 15	1	7-036	4.4	24	180	V.I.R.	L.C.A.B.
CREW ACCOMM. LIGHTING. PORT.	D.B. 7	1	7-064	19	46	150	V.I.R.	L.C.
" " " STAR.	D.B. 6	1	7-044	16	31	30	V.I.R.	L.C.
PORTABLE CONNECTIONS. AFT.	D.B. 8	1	7-036	6.9	24	180	V.I.R.	L.C.A.B.
CREW ACCOMM. LIGHTING. STAR.	D.B. 9	1	7-064	26.4	46	30	V.I.R.	L.C.
" " " PORT.	D.B. 9A	1	7-044	15.3	31	120	V.I.R.	L.C.
FORECASTLE LIGHTING.	D.B. 0	1	19-052	5.4	104	450	V.C.	L.C.A.B.
MIDSHIPS LIGHTING.	D.B. 1	1	19-052	40	104	120	V.C.	L.C.A.B.
MIDSHIPS ACCOMM. LIGHTING.	D.B. 17	1	7-064	30	46	60	V.I.R.	L.C.
" " " "	D.B. 2	1	7-044	17	31	90	V.I.R.	L.C.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
FUEL OIL CLARIFIER MOTOR	1	7.5	1	19-052	61 ✓	104	90	V.C.	L.C.A.B.
FUEL OIL PURIFIER MOTOR.	1	7.5	1	19-052	61 ✓	104	90	V.C.	L.C.A.B.
STANDBY OIL FUEL PUMP.	1	1.0	1	7-029	9.2 ✓	15	150	V.I.R.	L.C.A.B.
LUB. OIL PURIFIER MOTOR.	1	2.0	1	7-044	22 ✓	31	150	V.I.R.	L.C.A.B.
DRILLING MACHINE MOTOR.	1	2.0	1	7-036	18 ✓	24	60	V.I.R.	L.C.A.B.
GRINDING MACHINE MOTOR.	1	1.0	1	7-029.	9.2 ✓	15	60	V.I.R.	L.C.A.B.
LATHE MOTOR.	1	3.0	1	7-044.	26 ✓	31	60	V.I.R.	L.C.A.B.
TURNING GEAR MOTOR.	1	7.5	1	19-064.	61 ✓	135	195	V.C.	L.C.A.B.
ACCOMM. VENT. FAN AFT.	1	4.25	1	7-064	35 ✓	46	255	V.I.R.	L.C.A.B.
" " " MIDSHIPS.	1	4.25	1	7-064	35 ✓	46	150	V.I.R.	L.C.

LIGHTING AND HEATING Etc. CABLES.

PORTABLE CONNECTIONS FWD.	D.B. 5	-	1	7-044	13.1	31	90	V.I.R.	L.C.
MIDSHIPS ACCOMM. Ltg.	D.B. 4	-	1	7-044	22	31	48	V.I.R.	L.C.
PANTRY MIDSHIPS.	D.B. 3	-	1	7-064	38.6	46	60	V.I.R.	L.C.

The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.

All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.

The foregoing is a correct description.

FOR R. & W. HAWTHORN, LESLIE & CO. LIMITED.

For R. & W. Hawthorn, Leslie & Co. Limited
COMMERCIAL MANAGER
& SHIPYARD SECRETARY.

Electrical Engineers.

Date 14 MAY 1948

COMPASSES.

Minimum distance between electric generators or motors and standard compass 26 FEET

Minimum distance between electric generators or motors and steering compass —

The nearest cables to the compasses are as follows:—

A cable carrying 0.14 Ampères INSIDE feet from standard compass — feet from steering compass.

A cable carrying Ampères feet from standard compass feet from steering compass.

A cable carrying Ampères feet from standard compass feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power YES

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted YES

The maximum deviation due to electric currents was found to be Nil degrees on EVERY course in the case of the standard compass, and degrees on course in the case of the steering compass.

FOR R. & W. HAWTHORN, LESLIE & CO. LIMITED.
For R. & W. Hawthorn, Leslie & Co. Limited
COMMERCIAL MANAGER
& SHIPYARD SECRETARY.

Builder's Signature.

Date 14 MAY 1948

Is this installation a duplicate of a previous case No If so, state name of vessel

Plans. Are approved plans forwarded herewith YES If not, state date of approval

Certificates. Are certificates of test for motors engaged on essential services and generators forwarded herewith YES

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.)

THE ELECTRICAL EQUIPMENT OF THIS SHIP HAS BEEN INSTALLED IN ACCORDANCE WITH THE SOCIETY'S RULES AND REGULATIONS AND THE ARRANGEMENTS ARE IN ACCORDANCE WITH OR EQUIVALENT TO THOSE SHOWN ON THE APPROVED PLANS.

THE MATERIALS USED ARE OF GOOD QUALITY AND THE WORKMANSHIP IS SATISFACTORY.

ON COMPLETION THE INSULATION RESISTANCE OF ALL CIRCUITS WAS ABOVE RULE REQUIREMENTS, AND THE GENERATORS OPERATED ON LOAD AND GOVERNING TESTS WITH SATISFACTORY RESULTS.

THE EQUIPMENT, AS INSTALLED, IS, IN MY OPINION, SUITABLE FOR A CLASSED VESSEL.

N. J. 200

P. S.

31.5.48

Total Capacity of Generators 60 Kilowatts.

The amount of Fee £ 36 : 0 :

When applied for, 19 MAY 1948

Travelling Expenses (if any) £ : :

When received.

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Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 4 JUN 1948

Assigned

Su F.E. mch. rpt.