

26 JUN 1942

Rpt. 13.

No. 100,491

## REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report.....19..... When handed in at Local Office.....8/6/42..... Port of.....Newcastle on Tyne

No. in Survey held at.....Hebburn..... Date, First Survey.....23 Feb..... Last Survey.....27 May 1942.....  
Reg. Book.....37809..... on the.....NICANIA..... (Number of Visits.....10.....) 8179Built at.....Hebburn..... By whom built.....Hawthorn Leslie..... Yard No.....648..... When built.....1942.....  
Owners.....Anglo Saxon Petroleum Co Ltd..... Port belonging to.....London..... Tons { Gross.....8150  
Net.....4767

Electrical Installation fitted by.....Hawthorn Leslie..... Contract No..... When fitted.....1942.....

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..... Voltage of supply for Lighting.....110.....

Heating.....No..... Power.....Yes..... Direct or Alternating Current, Lighting.....Direct..... Power.....Direct..... 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..... 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

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.....Engine room starboard side.....

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.....Engine room starboard side 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.....Matt Interchem..... 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,

double throw quick break knife switches, and double pole

fuses.....

and for each outgoing circuit.....Double pole, double throw quick break knife switches

and double pole fuses.....

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 coupled to earth through switches

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.....less than..... 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.....

with insulating compound or waterproof insulating tape. *Yes* 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. *Yes*, are cables laid under machines or floorplates. *Yes*, if so, are they adequately protected. *Yes* Are cables in machinery spaces, galleys, laundries, etc., lead covered *Yes* or run in conduit. *Yes* State how the cables are supported and protected. *Lead covered and armoured clipped to metal trays or direct to steel work in machinery spaces etc., or accommodations lead covered clipped to wood battens, main engine cylinder lights V.P.R. in steel tube.*

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

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

Navigation Lamps, are they separately wired. *Yes* controlled by separate double pole switches. *Yes* and fuses. *Yes* Are the switches and fuses in a position accessible only to the officers on watch. *Yes*, is an automatic indicator fitted. *Yes* 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. *Yes* Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present. *Yes*, if so, how are they protected. *"Wigan"* *Flame proof fittings installed in centre castle space*

and where are the controlling switches fitted. *In officer accommodation*, are all fittings suitably ventilated. *Yes*, are all fittings and accessories constructed and installed as per Rule. *Yes* Searchlight Lamps, No. of *one*, whether fixed or 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. *Yes* and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil. *Yes*, 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. *Yes* Control Gear and Resistances, are they constructed and fitted as per Rule. *Yes* 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. *Yes*, are all fuses of the cartridge type. *Yes*, are they of an approved type. *Yes* Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships. *Yes* Are the cables lead covered as per Rule. *Yes* Spare Gear, if the vessel is for open sea service have spares been provided as per Rule. *Yes*, are they suitably stored in dry situations. *Yes* Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory. *Yes*

## PARTICULARS OF GENERATING PLANT.

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	Nº1	1	25	110	227	400	Steam engine	—
	Nº2	1	25	110	227	400	Oil (Diesel)	oil less than 150° F.
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	...	25	1	37/072	227	246	50"	VC	L.C. + A
EQUALISER	...	25	1	37/072	227	246	104"	VC	L.C. + A
EMERGENCY GENERATOR	...								
ROTARY TRANSFORMER: MOTOR	...								
GENERATOR	...								

MAIN DISTRIBUTION CABLES.

[illegible]

LIGHTING AND HEATING, ETC., CABLES.

[illegible]

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
Turning motor	1	7½	1	19/064	60	83	204'	V.I.R	L.C.A
Latch "	1	1½	1	7/029	12	15	60'	V.I.R	L.C.A
Grill "	1	2	1	7/036	16	24	60'	V.I.R	L.C.A
Grinder "	1	3	1	7/044	22	31	60'	V.I.R	L.C.A
Lub oil pump	1	2	1	7/036	16	24	150'	V.I.R	L.C.A
Fuel oil pump	1	1½	1	7/029	14	15	150'	V.I.R	L.C.A
Vent fan	1	4	1	7/064	32	46	300'	V.I.R	L.C.A
"	1	4	1	7/064	32	46	195'	V.I.R	L.C.
Exp "	1	09	1	3/036	0.8	10	75'	V.I.R	L.C.
Expj "	1		1	3/036	4	10	43'	V.I.R	L.C.
Auto compass	1		1	7/036	20	24	110'	V.I.R	L.C.A
Searchlight Projector	1	-	1	19/052	50	64	680'	V.I.R	L.C.A.B.
Shore Supply	1	-	1	37/072	-	246	180'	V.C.	L.C.A.

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.

*Stephenson*

Electrical Engineers.

Date *21<sup>st</sup> May 1942*

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass *18' 0"*

Minimum distance between electric generators or motors and steering compass *18' 0"*

The nearest cables to the compasses are as follows:—

A cable carrying *14* Ampères *inside* feet from standard compass — feet from steering compass.

A cable carrying *14* Ampères — feet from standard compass *inside* 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 *Nil* degrees on *Every* course in the case of the steering compass.

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

*Stephenson*

Builder's Signature.

Date *21<sup>st</sup> May 1942*

Is this installation a duplicate of a previous case — If so, state name of vessel —

Plans. Are approved plans forwarded herewith *No* If not, state date of approval *1/12/41*

Certificates. Are certificates of test for motors engaged on essential services and generators forwarded herewith *No*

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

*equipment of this vessel was installed in accordance with the approved plans. The materials used are of good quality and the workmanship is good. On completion the equipment was operated under working conditions with satisfactory results and the insulation resistance of all circuits and apparatus was measured and found good. This equipment in my opinion suitable for a classed vessel.*

*Noted  
H.M.  
2.7.42*

Total Capacity of Generators *50* Kilowatts.

*See etc*  
The amount of Fee ... £ *27 : 10* :

Travelling Expenses (if any) £ : :

When applied for,

*24 JUN 1942*

When received,

.....10.....

*W. H. Connell*

Surveyor to Lloyd's Register of Shipping.

FRI. 3 JUL 1942

Committee's Minute

Assigned

*See Nwc. 26 100491*



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Foundation