

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report... 31st MARCH 1944. When handed in at Local Office... 11 APR 1944. Port of... GLASGOW.

No. in Survey held at... GOVAN. GLASGOW. Date, First Survey... 8th JUL 1944. Last Survey... 30th MARCH 1944. (Number of Visits... 7)

Reg. Book. 39021 on the M.V. "NASSARIUS." Tons { Gross 8390 Net 5550

Built at... BELFAST. By whom built... HARLAND & WOLFF LTD. Yard No. 1195. When built... 1943

Owners... ANGLO-SAXON PETROLEUM CO. LTD. Port belonging to... LONDON.

Electrical Installation fitted by... HARLAND & WOLFF LTD. GOVAN. GLASGOW. Contract No. —. When fitted... 1944

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... —. 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... SINDANYE, 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 SWITCH AND DOUBLE POLE FUSES.

and for each outgoing circuit... DOUBLE POLE SWITCH AND FUSE ON EACH POLE.

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

ammeters... TWO 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... 6 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... —

Are paper insulated and varnished cambric insulated cables sealed at the ends... —

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Are paper insulated and varnished cambric insulated cables sealed at the ends... —

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... **YES**, are cables laid under machines or floorplates... **NO**, if so, are they adequately protected... Are cables in machinery spaces, galleys, laundries, etc., lead covered... **Pyrotanax** or run in conduit... State how the cables are supported and protected... **Pyrotanax Cables Clipped To Perforated Steel Trays.**

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 effectually 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... **By**

ENCLOSURE IN WELDED GASTIGHT BOXES IN PUMP ROOM ENTRANCE AND BY USE OF ADMIRALTY TYPE TANGIA PATT FITTINGS IN MAGAZINES.

and where are the controlling switches fitted... **Remote from Pumping Entrances & Outside Magazines**, are all fittings suitably ventilated... **YES**,

are all fittings and accessories constructed and installed as per Rule... **YES**. Searchlight Lamps, No. of... **-**, 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... **YES**

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... **YES**. 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... **Pyrotanax**. 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.

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	675	STEAM ENGINE		
	1	30	110	273	675	DIESEL ENGINE.	OIL ABOVE 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 mm ² .	In the Circuit.	Rule.			
MAIN GENERATOR No. 1. (DIESEL)	30	1	0.2	273	296	96	Pyrotanax Cable.	
" " EQUALISER								
MAIN GENERATOR No. 2. (STEAM)	30	1	0.2	273	296	72	"	"
SHORE CONNECTION.	-	1	0.2	250	296	102	"	"
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	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 mm ² .	In the Circuit.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS ...							
MASTER BOARD (MIDSHIP)	2	0.15	151	2x246	570	Pyrotanax.	
SECT. Box No. 1. (WT. & NAV.)	1	0.1	35	191	660	Pyrotanax.	
SECT. Box No. 2. (ACCOM. AFT.)	1	0.06	65	135	242	"	
SECT. Box No. 3. (ENG. ROOM MOTORS)	1	0.1	86	191	180	"	
SECT. Box No. 4. (ENG. RM. Ltg. & AFT. ACCOM. VENT. FAN)	1	0.06	81	135	132	"	
D.G. INSTALLATION.	1	0.15	120	152	50	V.I.R.	L.S.A.B. (37/672)

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	0.06	25	135	60	-	Pyrotanax.
NAVIGATION LIGHTS & D.B. No. 1 (CIRCUITS 1 TO 6)	1	0.0045	12	15	40	-	"
LIGHTING AND HEATING (D.B. 1 (Cts. 7 & 8) MAST LANTERNS)	1	0.01	7	42	150	-	"
LIGHTING D.B. 2. NAVY & UPPER BRIDGE	1	0.0145	15	54	60	-	"
" D.B. 3 BRIDGE DECK PORT.	1	0.0145	25	57	12	-	"
" D.B. 4 BR. DK. STB ² & PUMP RMs.	1	0.0145	29	54	12	-	"
" D.B. 5 FORECASTLE.	1	0.0145	16	54	360	-	"
" D.B. 6 PORTABLES AFT.	1	0.007	10	28	12	-	"
" D.B. 7 AFT. ACCOM. PORT.	1	0.0225	21	75	90	-	" MAINS LOOPING.
" D.B. 9 AFT. ACCOM. PORT.	1	0.0225	12	75	12	-	"
" D.B. 8 AFT. ACCOM. STB ²	1	0.0225	12	75	12	-	" MAINS LOOPING.
" D.B. 10 AFT. ACCOM. STB ²	1	0.0225	11	75	12	-	"
" D.B. 11 ENG. ROOM LANTERNS PORT	1	0.007	13	28	180	-	"
" D.B. 12 ENG. ROOM LANTERNS STB ²	1	0.0045	8	15	150	-	"
" D.B. 13 ENG. ROOM & STORES	1	0.0045	5	15	60	-	"
" D.B. 14 ENG. ROOM & WORKSHOP	1	0.007	5	28	180	-	"
" D.B. 15 TANK TOP PORT.	1	0.0045	7	15	210	-	"
" D.B. 16 TANK TOP STB ² .	1	0.0045	7	15	95	-	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
TURBINE GEAR MOTOR	1	10	1	0.04	80	104	90	Pyrotanax.
MID. ACCOM. VENT ⁿ FAN	1	4	1	0.0225	33	75	162	"
AFT. ACCOM. VENT ⁿ FAN	1	4	1	0.0225	33	75	240	"

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 HARLAND AND WOLFF, LIMITED
J. J. Seelie Electrical Engineers. Date 4th April 1944
 Glasgow Secretary.

COMPASSES.

Minimum distance between electric generators or motors and standard compass 15 FEET FROM W/T. MOTOR ALTERNATOR
 Minimum distance between electric generators or motors and steering compass 16 FEET FROM W/T. MOTOR ALTERNATOR

The nearest cables to the compasses are as follows:—

A cable carrying 0.1 Ampères led into feet from standard compass 8 feet from steering compass.

A cable carrying 0.1 Ampères 10 feet from standard compass led into feet from steering compass.

A cable carrying 25.0 Ampères 7 feet from standard compass 7 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 ANY course in the case of the standard compass, and Nil degrees on ANY course in the case of the steering compass.

FOR HARLAND AND WOLFF, LIMITED
J. J. Seelie Builder's Signature. Date 4th April 1944
 Glasgow Secretary.

Is this installation a duplicate of a previous case YES. If so, state name of vessel M.V. "NOAHISH"

Plans. Are approved plans forwarded herewith No. If not, state date of approval 17th Nov. 1943

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 vessel has been fitted on board under special survey tested under full working conditions and found satisfactory.
 The materials and workmanship are good.*

*Notes
 JRM
 20.4.44*

Total Capacity of Generators 60 Kilowatts.

The amount of Fee ... £ 28 : 10 : 10 When applied for 12 APR 1944
 Travelling Expenses (if any) £ : : When received. 10

R. P. Storie
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 12 APR 1944

Assigned _____

500,438.—Transfer. (MADE AND PRINTED IN ENGLAND.)
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

