

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

MAR 13 1941

Received at London Office.....

Date of writing Report 1<sup>st</sup> March 1941 When handed in at Local Office 8:30 1941 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 4:12:40 Last Survey 11<sup>th</sup> February 1941  
Reg. Book. (Number of Visits.....)

on the S.S. "NASPRITE" Tons { Gross 965  
Net 306

Built at Glasgow By whom built Blythswood S.B.C. L<sup>td</sup> Yard No. 65 When built 1941

Owners Admiralty Port belonging to LONDON

Electrical Installation fitted by The Sunderland Forge & Eng. Co. L<sup>td</sup> Contract No. 65 When fitted 1941

Is vessel fitted for carrying Petroleum in bulk Yes Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. - 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 frequency - Prime Movers, -

has the governing been tested and found efficient when the whole 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 Yes, 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 Shidam

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

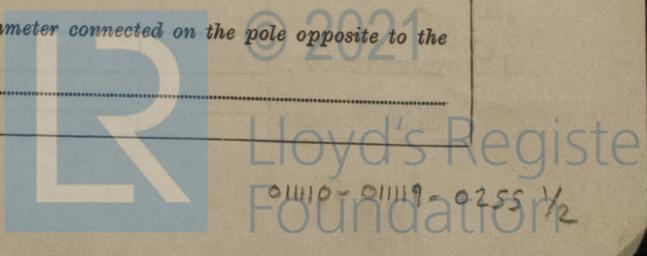
Description of Main Switchgear for each generator and arrangement of equaliser switches

Trip pole magnetic blow out circuit breakers with 1/2 time lag & reverse current trip, third pole acting as equaliser.

and for each outgoing circuit 2 P. Surtel and fuses

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule - 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 Yes 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, are the reversed current protection devices connected on the pole opposite to the equaliser connection Yes, have they been tested under working conditions Yes. 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 40 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 exposed 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 —, if so, are they adequately protected —. Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit —. State how the cables are supported and protected Mains L.C. in galvanised steel pipe Machinery spaces L.C. clipped to steel keel Accommodation L.C. clipped

Are all lead sheaths, armouring and conduits effectually bonded and earthed Yes. 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 Yes, where unarmoured cables pass through beams, etc., are the holes effectually bushed Yes and with what material fibres. 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 —.

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 Lighting fittings in pump rooms installed in accordance with Rule requirements

and where are the controlling switches fitted in accommodation, are all fittings suitably ventilated Yes, are all fittings and accessories constructed and installed as per Rule Yes. Searchlight Lamps, No. of 1, whether fixed or portable portable, are their fittings as per Rule Yes. 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 —.

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 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. If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flameproof type —. 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 megger 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.
MAIN ...	2	10	110	91	500	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. of sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ...	10	1	19/083	91	118	30	Rubber.	L.C.
" " EQUALISER ...		1	"		118			
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTOR ...								
" " GENERATOR ...								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.		
AUX. SWITCHBOARDS AND SECTION BOARDS ...								
VENT FANS SB		1	19/052	44	64	90	Rubber	L.C.
ACCOMMODATION S.B.		1	19/052	51	64	90	"	L.C.

LIGHTING AND HEATING, ETC., CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.		
WIRELESS ...		1	7/064	35	46	120	Rubber.	L.C.
NAVIGATION LIGHTS DB		1	7/036	10	24	200	Rubber.	L.C.
LIGHTING AND HEATING ...								
ACCOMMODATION L <sup>th</sup> FORD DB		1	7/036	10	24	110	"	"
POLICE L <sup>th</sup> DB		1	7/029	10.2	15	90	"	"
ENGINE & BLR ROOM L <sup>th</sup> DB		1	7/029	11.8	15	20	"	"
10" SIGNALLING PROJECTOR.		1	7/044	19	31	220	"	"
DECK & FLOOD L <sup>th</sup> DB		1	7/044	135	31	200	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.		
VENT FANS (Accom) 12 1/2"	2	0.8/1.45	1	7/029	13.0	15	150	Rubber	L.C.
" (Eng. Room) 12 1/2"	2	0.7	1	3/086	7.0	10.0	30	"	"
" (Accom.) 5"	1	0.18	1	1/044	1.9	5	50	"	"

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.

*C. S. Stewart*  
 P. Pro. THE SUNDERLAND FORGE & ENG. CO. LTD. Electrical Engineers. Date 3/3/41.

COMPASSES.

Minimum distance between electric generators or motors and standard compass 25 feet  
 Minimum distance between electric generators or motors and steering compass 20 feet

The nearest cables to the compasses are as follows:—  
 A cable carrying 0.2 Ampères led into feet from standard compass led into feet from steering compass.  
 A cable carrying 10 Ampères 6. feet from standard compass 8 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 any course in the case of the standard compass, and nil degrees on any course in the case of the steering compass.

GLYTHSWOOD SHIPBUILDING CO. LTD. Builder's Signature. Date 7. March 1941  
*John Stewart*

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

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 tests under full working conditions and found satisfactory. The material and workmanship are good.*

*Job 8/3/41*

*Noted L.S. 14/3/41*

Total Capacity of Generators 20 Kilowatts.

The amount of Fee ... £ 17 : 10 : { When applied for, 4/3/1941  
 Travelling Expenses (if any) £ : : { When received, 10

*L. S. Findlay*  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 11 MAR 1941

Assigned See Ch. I. C. Rpt.

241,10,38.—Transfer. (MADE IN ENGLAND.)  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)