

REPORT ON ELECTRICAL EQUIPMENT

[OTHER THAN FOR THE PROPULSION OF THE VESSEL]

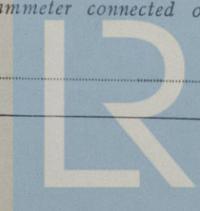
29 APR 1949

Received at London Office

Date of writing Report 23rd March 1949 When handed in at Local Office 23rd March 1949 Port of Sydney N.S.W.No. in Survey held at SYDNEY, N.S.W. Date: First Survey 19th March 1948 Last Survey 11th Feb., 1949
Reg. Book (Number of Visits 9)70040 on the M.V. NYORA Tons { Gross 1356.51
Net 675.93Built at EMDEN, GERMANY By whom built Nordsee Werke Gmb.H Yard No. 175 When built 1935Owners Commonwealth of Australia (Dept. Shipping & Fuel) Port belonging to Sydney N.S.W.Electrical Installation/fitted by DELAIRCO, SYDNEY Contract No. _____ When fitted 1948Is vessel fitted for carrying Petroleum in bulk No Is vessel equipped with D.F. No E.S.D. No Gy.C. No Sub.Sig. NoHave plans been submitted and approved Yes System of Distribution 2 Wire Voltage of supply for Lighting 220Heating 220 Power 220 Direct or Alternating Current, Lighting DC Power DC If Alternating Current, state frequency £ Prime Movershas the governing been tested and found efficient when the whole load is suddenly thrown on and off Yes Are turbine emergency governors fitted with atrip switch as per Rule - Generators, are they compound wound Yes, are they level compounded under working conditions Yesif not compound wound, state distance between generators - and from switchboard - Where more than one generator is fitted, are theyarranged to run in parallel Yes, are shunt field regulators provided Yes Is the compound winding connected to the negative or positive poleNegative Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing - Have certificates oftest for machines under 100 kw. been supplied No and the results found as per rule - Are the lubricating arrangements and the constructionof the generators as per rule Yes Position of Generators Port and Stbd. Engine Roomis the ventilation in way of generators satisfactory Yes, are they clear of inflammable material Yes, if situatednear unprotected combustible material, state distance from same horizontally - and vertically -, are the generators protected from mechanicalinjury and damage from water, steam and oil Yes, are the bedplates and frames earthed Yes and the prime movers and generators in metalliccontact Yes Switchboards, where are main switchboards placed In Eng. Room, Port Sideare they in accessible positions, free from inflammable gases and acid fumes yes, are they protected from mechanical injury and damage from water, steamand oil Yes, if situated near unprotected combustible material, state distance from same horizontally - and vertically -, what insulationmaterial is used for the panels Miscolite, if of synthetic material is it an Approved Type -, if ofsemi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule - Is the frame effectually earthed YesIs the construction as per Rule Yes, including accessibility of parts Yes, absence of fuses on the back of the board Yes, individual fusesto 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 arrangements of equaliser switches 300 amp Air

Circuit breakers fitted with oil overload time lag on each pole. No volt and reverse

current release

and for each outgoing circuit D.P. quick break knife switches and D.P. FusesAre compartments containing switchboards composed of fire-resisting material or lined as per Rule YES Instruments on main switchboard Threeammeters Three voltmeters Three synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to theequaliser 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 **1 volt**, 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 **Yes** 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 **Yes** or run in conduit **No**. State how the cables are supported and protected **Secured by galvanised iron clips to perforated tray on bulkhead and protected where exposed to possible damage. Mast and derrick post ^{are} one in T.R.S. in waterpipe.**

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 Light Supply, state position **Engine Room Top** and method of control **D.P. Switch in Wheelhouse**.

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 **Yes**, are they adequately ventilated **Yes**. 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 **No**, if so, how are they protected **--**.

and where are the controlling switches fitted **--** 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 **Yes**.

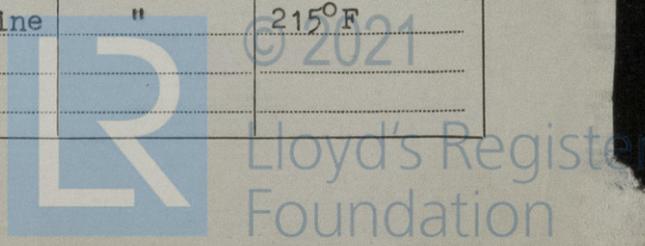
are the frames effectually earthed **Yes**, are heaters in the accommodation of the convection type **--**. Motors, are all motors constructed and installed as per Rule **Yes** and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam 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 **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 **--**, are all fuses of the cartridge type **--**.

are they of an approved type **--**. 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	Amperes	Revs. per Min.		Fuel Used	Flash Point of Fuel
MAIN	1	60	225	267	1250	6 cyl. Diesel Engine	Distillate	
	1	60	225	267	1250	"	"	
	1	20	220	181.8	1200	4 cyl. Diesel Engine	"	215°F
EMERGENCY								
ROTARY TRANSFORMER								



13.

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 No.1 Port	60	1	61/093	267	288	48	Rubber	Lead sheath
" " EQUALISER		1	37/093		214	24(Single)"	"	"
" " No.2 Stbd.	60	1	61/093	267	288	114	"	"
" " " "		1	37/093		214	57(Single)"	"	"
" " No.2 Port	20	1	19/083		118	72	"	"
" " Equaliser		1	37/093		214	36(Single)"	"	"
EMERGENCY GENERATOR	20	1						
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION	TYPE	No.	CONDUCTORS	MAXIMUM CURRENT	APPROX. LENGTH	INSULATED WITH	HOW PROTECTED
AUX. SWITCHBOARDS AND SECTION BOARDS							
Fwd. Sub Board	C	1	37/093	299 ✓	214	286	
Aft. Sub Board	D	1	19/083	190 ✓	118	220	

LIGHTING AND HEATING, ETC., CABLES

WIRELESS	A	1	7/036	15 ✓	24	40	
NAVIGATION LIGHTS	E	1	3/036	1 ✓	15	10	844
LIGHTING AND HEATING							
Circuit A -- D P1		1	7/064	29 ✓	46	82	
" B -- D P2		1	19/064	62 ✓	83	84	
" F --		1	7/036	5 ✓	15	24	38

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED	No.	B.H.P.	CONDUCTORS	MAXIMUM CURRENT	APPROX. LENGTH	INSULATED WITH	HOW PROTECTED
Winches	8	21	1 19/064	90 ✓	83	692	
Windlass to Sub.	1	30HP	1 19/083	114 ✓	118	188	
Ballast to Pump	1	13	1 19/064	52 ✓	83	166	
Air Compressor	2	10	1 7/064	40 ✓	46	168	
Bilge & General Serv. Pump	1	13	1 7/064	38 ✓	46	190	
Fuel & Sub Oil	1	7½	1 7/044	30 ✓	31	130	
Refrig. Compressor	1	3HP	1 7/036	13 ✓	24	32	
Turning Motor	1	7½	1 7/044	30 ✓	31	44	
Sanitary Pump	1	1	1 3/036	5 ✓	10	112	
Oil Purifier	1	1	1 3/036	5 ✓	10	196	
Hot Water Pump	1	1	1 3/036	2-8 ✓	10	70	
Axial Flow Fan	2	4	1 3/036	4 ✓	10	226	
Fresh Water Pump	1	1	1 3/036	5 ✓	10	100	
Steering Gear			1 7/064	40 ✓	46	404	

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.

J.C. MILLER T/As "DELAIRCO

J. Miller
J. C. Miller

Electrical Engineers.

Date 18-2-49

DREADNOUGHT ENGINE PTY, LTD.

COMPASSES.

Minimum distance between electric generators or motors and standard compass

Minimum distance between electric generators or motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying .09 Amperes Led into feet from standard compass Led into feet from steering compass.

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

A cable carrying Amperes 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

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

Builder's Signature Date

Is this installation a duplicate of a previous case No 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 installation of this vessel has been installed and fitted on board in accordance with the Rules and approved plans. The materials and workmanship are good. Insulation resistance tested. The trials required by the Rules have been satisfactorily carried out, and in my opinion the installation is now eligible for Classification with the Society.

Noted sub 25/5/49

Total Capacity of Generators 140 Kilowatts.

The amount of Fee .. £ 115:0 : When applied for, 15/2/49
 Travelling Expenses (if any) £ : : When received, 10/3/49

H. Genard
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI, 27 MAY 1949

Assigned See minute on file.

100-11/47-1. P.O.B.—TRANSFER. (PRINTED IN AUSTRALIA)
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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