

Rpt. 13.

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

No. 74651

Date of writing Report 25<sup>th</sup> October 1949 When handed in at Local Office 19 Received at London Office 10 NOV 1949  
 No. in Survey held at GRANGEMOUTH Date, First Survey 28<sup>th</sup> April Last Survey 23<sup>rd</sup> August 1949  
 Reg. Book. (No. of Visits           )

23430 on the S.S. 'RHINELAND' (ex 'SCHWAN' - 49) Tons { Gross            Net             
 Built at KIEL By whom built HOWALDTSWERKE H.G. Yard No.            When built 1938  
 Owners CURRIE LINE, LTD Port belonging to LEITH  
 Installation <sup>Re-</sup>fitted by GRANGEMOUTH DOCKYARD CO. LTD When fitted 1949  
 Is vessel equipped for carrying Petroleum in bulk No Is vessel equipped with D.F. YES E.S.D. YES Gy.C.            Sub.Sig.            Radar           

Plans, have they been submitted and approved YES System of Distribution TWO WIRE Voltage of Lighting 110  
 Heating            Power 110 D.C. or A.C., Lighting D.C. Power D.C. If A.C. state frequency             
 Prime Movers, has the governing been found as per Rule when full load is thrown on and off YES Are turbine emergency governors fitted with a trip switch            Generators, are they compound wound YES, and level compounded under working conditions YES, if not compound wound state distance between generators            and from switchboard            Are the generators 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            and the results found as per Rule           

Position of Generators STARBOARD SIDE OF ENGINE ROOM  
 is the ventilation in way of generators satisfactory YES are they clear of inflammable material and protected from mechanical injury and damage from water, steam and oil YES Switchboards, where are main switchboards placed NEAR GENERATORS

are they in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water, steam and oil YES, what insulation is used for the panels ADMIRALTY GRADE 'H' BAKELITE, 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 construction as per Rule, including locking of screws and nuts YES Description of Main Switchgear for each generator and arrangement of equaliser switches D.P. CHANGEOVER SWITCH WITH FUSES

and the switch and fuse gear (or circuit breakers) for each outgoing circuit D.P. KNIFE PATTERN SWITCHES WITH FUSES

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule            Instruments on main switchboard THREE ammeters THREE voltmeters            synchronising devices            For compound machines in parallel are the ammeters and reversed current protection devices 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, make of fuses SIEMENS 'ZED' TYPE, are all fuses labelled YES If circuit breakers are provided for the generators, at what overload do they operate           , and at what current do the reversed current protective devices operate           

Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule YES Cables, are they insulated and protected as per Rule CONTINENTAL TYPE, 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 4.3 VOLTS, are the ends of all cables having a sectional area of 0.01 square inch and above provided with soldering sockets YES Are all paper insulated and varnished cambric insulated cables sealed at the ends            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 any 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            or of the "HR" type            State how the cables are supported or protected MAINS - L.C.A.B. CABLE CLIPPED TO

STEEL TRAY MACHINERY SPACE - L.C. OR L.C.A. CABLE CLIPPED TO STEEL WORK OR TRAY  
ACCOMMODATION SPACES L.C. CABLE CLIPPED TO WOODWORK

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

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Insulation Tests. has the insulation resistance of all circuits and apparatus been tested and found satisfactory..... YES

PARTICULARS OF GENERATING PLANT.							PRIME MOVER.	
DESCRIPTION OF GENERATOR.	No. of	MAKER.	RATED AT				TYPE.	MAKER.
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.		
MAIN ...	1	✓	15	115	130	1000	DIESEL	KLOCKNER HUMBOLDT DEUT.
	1	SIEMENS SCHUCKERT	80	115	87	465	STEAM.	BOHM KAHLE A.G.
	1	A.E.G.	7½	115	66	<del>2000</del> 3200	✓	✓
EMERGENCY ...								
ROTARY								
TRANSFORMER								

GENERATOR CABLES.								
DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (load plus return feet).	INSULATION.	PROTECTIVE COVERING.
		No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ... ..	15	1	37/083	130	184	48	RUBBER	L.C.H.B.
" " EQUALISER ... ..	10	1	19/083	87	118	36	RUBBER	L.C.H.B.
" " ... ..	7½	1	19/064	66	83	70	RUBBER	L.C.H.B.
EMERGENCY GENERATOR ... ..								
ROTARY TRANSFORMER: MOTOR ... ..								
" " GENERATOR... ..								

[illegible][illegible][illegible]



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.

Electrical Contractors. Date.

#### COMPASSES.

Have the compasses been adjusted under working conditions.

Builder's Signature. Date.

Have the foregoing descriptions and schedules been verified and found correct.

YES.

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

Plans. Are approved plans forwarded herewith. No If not, state date of approval. 9th OCTOBER 1949

Certificates. Are certificates of test for motors engaged on essential sea 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 installation of this vessel, as now seen, is in good order and the quality of materials and workmanship is good. The installation, in my opinion, is such as could be accepted for classification by this Society.

Total Capacity of Generators. 32 1/2 Kilowatts.

The amount of Fee £ 12 : 0 :  
ALTERATION FEE £ 8 : 8 :  
When applied for,  
29 NOV 1949

Travelling Expenses (if any) £ : ✓ :  
When received,  
19

Committee's Minute. 29 NOV 1949

Assigned.

M. Gardiner  
Surveyor to Lloyd's Register of Shipping.