

# REPORT ON ELECTRICAL EQUIPMENT.

No. 31628

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 10 When handed in at Local Office 17 MAY 1935 Received at London Office 18 MAY 1935

No. in Survey held at Sunderland Date, First Survey 3 Apr '35 Last Survey May 14 1935  
Reg. Book. Supp. 89982 on the M.V. "KIRRIEMOOR" (Number of Visits 9)

Tons { Gross 4970  
Net 3032

Built at Sunderland By whom built W. Daxford Sons Ltd. Yard No. 614 When built 1935

Owners Lord Runciman Shipping Co Ltd Port belonging to London

Electric Light Installation fitted by Messrs Campbell Iskerwood & Co Contract No. When fitted 1935

Is the Vessel fitted for carrying Petroleum in bulk no.

System of Distribution Double wire ✓

Pressure of supply for Lighting 110 volts, Heating —, Power 110 volts.

Direct or Alternating Current, Lighting Direct ✓, Power Direct ✓

If alternating current system, state frequency of periods per second —

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off yes ✓

Generators, do they comply with the requirements regarding temperature rise yes ✓, are they compound wound yes ✓

are they over compounded 5 per cent. yes ✓, if not compound wound state distance between each generator —

Where more than one generator is fitted are they arranged to run in parallel no ✓, is an adjustable regulating resistance fitted in series with each shunt field yes ✓

approved enclosed herewith Have certificates of test results for machines under 100 kw. been submitted and Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing —

Are all terminals accessible, clearly marked, and furnished with sockets yes ✓, are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched yes ✓

Position of Generators Engine room S. Side forward ✓, is the ventilation in way of the generators satisfactory yes ✓

are they clear of all inflammable material yes ✓, if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators — and —

are the generators protected from mechanical injury and damage from water, steam or oil yes ✓, are their axes of rotation fore and aft yes ✓

Earthing, are the bedplates and frames of the generating plant efficiently earthed yes ✓, are the prime movers and their respective generators in metallic contact yes ✓

Main Switch Boards, where placed Engine room S. Side forward ✓  
If the generators and main switchboard are not placed in the same compartment, is each generator provided with a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard —

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes yes ✓, are they protected from mechanical injury and damage from water, steam or oil yes ✓

if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards — and —, are they constructed wholly of durable, non-ignitable non-absorbent materials yes ✓

is all insulation of high dielectric strength and of permanently high insulation resistance yes ✓, is it of an approved type yes ✓

if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework yes ✓, is the non-hygroscopic insulating material of an approved type yes ✓

and is the frame effectively earthed yes ✓, Are the fittings as per Rule regarding:— spacing or shielding of live parts yes ✓, accessibility of all parts yes ✓

absence of fuses on back of board yes ✓, temperature rise of omnibus bars yes ✓, individual fuses to voltmeter, pilot or earth lamp yes ✓

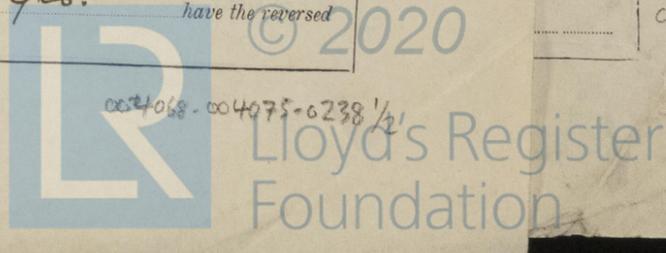
are moving parts of switches alive in the "off" position no ✓, are all screws and nuts securing connections effectively locked yes ✓, are any fuses fitted on the live side of switches yes ✓

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches DPS + fuses on dynamos, SR COS + DP fuses on each outgoing circuit ✓

Are turbine driven generators fitted with emergency trip switch as per rule — Are cupboards or compartments containing switchboards composed of fire-resisting material or lined with approved material — Instruments on main switchboard 2 ammeters 2

voltmeters — synchronising device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system E lamps coupled to E through SP switches + fuses ✓

do these comply with the requirements of the Rules yes ✓, are the fusible cutouts of an approved type yes ✓, have the reversed —





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 ... ..	2	12.5	110	114	375	Steam engines		
AUXILIARY ... ..								
EMERGENCY ... ..								
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	Circuit.	Rule.			
MAIN GENERATOR ... ..	1	.1009	19	.083	114	119 ✓	30	V.I.R	L.C.B
EQUALISER CONNECTIONS ... ..									
AUXILIARY GENERATOR ... ..									
EMERGENCY GENERATOR ... ..									
ROTARY TRANSFORMER } MOTOR GENERATOR ... ..									
ENGINE ROOM ... ..									
BOILER ROOM ... ..	1	.01046	7	.044	17.5	31 ✓	75	50	in pipe
AUXILIARY SWITCHBOARDS ... ..									
ACCOMMODATION Midships	1	.01046	7	.044	14.9	31 ✓	90	50	50
Cargo shaft	1	.01046	7	.044	12.6	31 ✓	90	50	50
WIRELESS ... ..	1	.01046	7	.044	12	31 ✓	175	50	50
SEARCHLIGHT ... ..	1	.00194	3	.029	1.4	7.8 ✓	400	50	50
SIDE LIGHTS ... ..	1	.00194	3	.029	1.4	7.8 ✓	60	50	L.C
COMPASS LIGHTS ... ..	1	.00194	3	.029	1.4	7.8 ✓	20	50	50
Stem POOR LIGHTS ... ..	1	.00194	3	.029	1.4	7.8 ✓	500	50	in pipe
CARGO LIGHTS ... ..	1	.0017	40	.0076	2.4	5.0 ✓	120	50	Cat Tyre
ARC LAMPS ... ..									
HEATERS ... ..									

MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP ... ..										
MAIN BILGE LINE PUMPS ... ..										
GENERAL SERVICE PUMP ... ..										
EMERGENCY BILGE PUMP ... ..										
SANITARY PUMP ... ..										
CIRC. SEA WATER PUMPS ... ..										
CIRC. FRESH WATER PUMPS ... ..										
AIR COMPRESSOR ... ..										
FRESH WATER PUMP ... ..										
ENGINE TURNING GEAR ... ..										
ENGINE REVERSING GEAR ... ..										
LUBRICATING OIL PUMPS ... ..										
OIL FUEL TRANSFER PUMP ... ..										
WINDLASS ... ..										
WINCHES, FORWARD ... ..										
WINCHES, AFT ... ..										
STEERING GEAR—										
(a) MOTOR GENERATOR ... ..										
(b) MAIN MOTOR ... ..										
WORKSHOP MOTOR ... ..	1	1	.007	7	.036	17.5	24 ✓	75	V.I.R	in heavy gauge Cond. 1"
VENTILATING FANS Bales	1	1	.007	7	.036	20.2	24 ✓	75	50	50
Crane	1	1	.007	7	.036	19	24 ✓	75	50	50
Shoeples	1	1	.01	7	.044	25.5	31 ✓	100	50	50

All Conductors are of annealed copper conforming to British Standard Specification No. 7 (or International Electro-technical Commission Publication No. 28).

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

CAMPBELL & ISHERWOOD, LTD.

*Handwritten signature*

Electrical Engineers.

Date 16th May 1935

COMPASSES.

Distance between electric generators or motors and standard compass 70 feet

Distance between electric generators or motors and steering compass 64 feet.

The nearest cables to the compasses are as follows:—

A cable carrying .4 Ampères on the feet from standard compass 6 feet from steering compass.

A cable carrying .4 Ampères 6 feet from standard compass on the 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 all course in the case of the standard compass, and nil degrees on all course in the case of the steering compass.

WILLIAM DOXFORD & SONS, Limited.

*Handwritten signature*

Managing Director.

Builder's Signature.

Date 17 May 1935

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

General Remarks (State quality of workmanship, opinions as to class, &c. The above inst<sup>n</sup> has been fitted out under special survey. The materials & workmanship good. On completion the inst<sup>n</sup> was tested under working conditions & found to be satisfactory. Insulation resistance good. Eligible, in my opinion to have notation D.F

With notation D.F

*Handwritten signature*

22/5/35

*Handwritten signature*

Total Capacity of Generators 25 Kilowatts.

The amount of Fee ... £ 20 : - : { When applied for, 15. 5. 35

Travelling Expenses (if any) £ : : { When received, 17. 5. 19. 35

*Handwritten signature*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 24 MAY 1935

Assigned

See Std. J.E. 31628

2m.534.—Transfer. The Surveyors are requested not to write on or below the space for Committee's Minute.



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