

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 3. 1. 1950 When handed in at Local Office 19 Port of Sunderland

No. in Survey held at Sunderland Date, First Survey 20. 10. 49 Last Survey 12. 12. 1949
Reg. Book. (No. of Visits 11)

on the M.V. "DARTMOOR" Tons ^{Gross} 5314 _{Net} 1918
Built at Sunderland By whom built Wm. Rosford & Sons Ltd Yard No. 771 When built 1949

Owners Moor Line Ltd (W. Rensington Ltd) Port belonging to London
Installation fitted by Campbell & Johnson 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. No Sub.Sig. No Radar No

Plans, have they been submitted and approved Yes System of Distribution Wires 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 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

Position of Generators engine room forward hold, starboard 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 on raised deck above gunwales

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 "PIERITTE", 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 a triple pole (one pole for equaliser) air-break circuit-breaker with oil & R.V. current trips

and the switch and fuse gear (or circuit breakers) for each outgoing circuit a double pole R.V.C. switch and double pole fuse

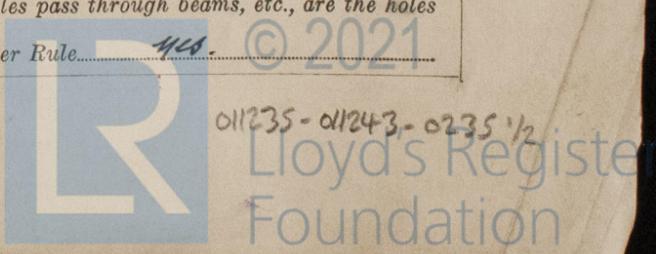
Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 2 ammeters 2 voltmeters - synchronising devices. For compound machines in parallel are the ammeters and reversed current protection devices connected on the pole opposite to the equaliser connection Yes Earth Testing, state means provided E. lamps

Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yes, make of fuses "Arvic" & "Blythlock", are all fuses labelled Yes If circuit breakers are provided for the generators, at what overload do they operate 5%, and at what current do the reversed current protective devices operate 15%

Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule Yes

Cables, are they insulated and protected as per Rule 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 7.6 V., 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 Yes 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 By 10 or run in conduit - or of the "HR" type - State how the cables are supported or protected Main feeders fore and aft along decks in iron pipes: Accommodation, H.R.B. cables on the surface clamped to wooden girders and protected where necessary by wood or metal guards.

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 Yes



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Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule 444 Emergency Supply, state position

Navigation Lamps, are they separately wired 444 controlled by separate double pole switches and fuses 444 Are the switches and fuses in a position accessible only to the officers on watch 444, is an automatic indicator fitted 444 Is an alternative supply provided 444

Secondary Batteries, are they constructed and fitted as per Rule 444, are they adequately ventilated 444 state battery capacity in ampere hours 444

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weather proof 444 Are any fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present 444 if so, how are they protected 444

and where are the controlling switches fitted 444 Are all fittings suitably ventilated 444

Searchlight Lamps, No. of 444, whether fixed or portable 444, are they of the carbon arc or of the filament type 444

Heating and Cooking, is the general construction as per Rule 444, are the frames effectually earthed 444, are heaters in the accommodation of the convection type 444 Motors, are all motors constructed and installed as per Rule and placed in well-ventilated compartments in which inflammable gases cannot accumulate and protected from damage from water, steam and oil 444

Are motors coupled to oil fuel transfer and pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment 444 Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing 444

Have certificates of test for motors under 100 BHP intended for essential sea services been supplied and the results found as per Rule 444

Control Gear and Resistances, are they constructed and fitted as per Rule 444 Lightning Conductors, where required are they fitted as per Rule 444 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 444, are all fuses of an Approved Cartridge Type 444, make of fuse 444 Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships 444 Are the cables lead covered as per Rule 444

E.S.D., if fitted state maker 444 Location of transmitter 444 and receiver 444

Spare Gear, if the vessel is for open sea service have spares been provided as per Rule and suitably stored in dry situations 444

Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory 444

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	MAKER.	RATED AT				PRIME MOVER.	MAKER.
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.		
MAIN ...	2	Kamptul & Scherwood	30	110	272	600	Steam	Reader
EMERGENCY ...								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead 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 ...	No. 1 30	1	37/083	272	314	35	V.C.	L.C.B.
" " EQUALISER ...	No. 2 30	1	37/064	210	17 1/2	"	"	"
" " ...	No. 3 30	1	37/083	272	314	30	"	"
" " ...	No. 4 30	1	37/064	210	15	"	"	"
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR...								

MAIN DISTRIBUTION CABLES (to Section Boards, Distribution Fuse Boards, etc.).

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Saloon House Section Panel 'A'	1	19/044	42	53	260	V.I.R. in pipe
Engine Room Top " 'B'	1	19/052	40	64	80	"
" " " " " 'C'	1	7/064	38	46	30	"
" " " " " 'D'	1	7/064	36	46	30	"
Painting Power & Engine Room Ventilators	1	19/052	55	64	260	"
Engine Room & Boat Deck Ventilators	1	7/064	41	46	30	"

LIGHTING, HEATING, WIRELESS, NAVIGATION LIGHTS, ETC., CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead 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.			
Navigation - Main Supply.	1	7/064	30	46	340	H.R.B.	
" " "	1	7/029	3	15	340	"	
" " "	1	"	-	15	20	"	
Abraham DB. 'A-1'	1	7/036	7	24	80	"	
Upper Bridge DB. 'A-2'	1	"	12	"	40	"	
Saloon House DB. 'A-3'	1	"	20	"	4	"	
Galley DB. 'B-1'	1	"	22	"	40	"	
Port accommodation DB 'B-2'	1	"	20	"	60	V.I.R.	In conduit
Food " " 'B-3'	1	7/044	12	31	190	"	"
Stoke " " 'B-4'	1	"	14	"	160	"	"
Oil DB. 'B-5'	1	"	6.5	21	400	"	"
Foremast DB. 'C-1'	1	"	22	"	360	"	"
Mainmast " 'C-2'	1	"	18	"	200	"	"
Engine Room DB 'D-1' Port	1	"	18	"	10	"	"
Boiler " " 'D-3'	1	"	18	"	24	"	"
Engine " " 'D-2' Starb.	1	"	15	"	80	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead 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.			
Vent Fan - Boat Deck.	1	2.5	1	7/044	22	31	100	V.I.R.	In Conduit
Galley Exhaust Fan.	1	2.5	1	002	3.2	5	20	P.V.T.	"
Refrigerating Compressor.	1	5	1	7/064	42	46	48	V.I.R.	In Conduit
" Water Pump	1	1	1	7/036	9	24	40	"	"
Stairs Motor	1	3	1	7/044	26	31	96	"	"
Workshop Motor	1	2	1	"	18	"	160	"	"
Oil Separator	2	3	1	"	26	"	70	"	"
Engine Room Vent Fans	2	1.35	1	7/036	13	24	70/120	"	"
Painting Pump	1	1.5	1	7/044	16	31	100	"	"
Boiler Room Fan.	1	3.5	1	7/064	35	46	110	"	"
Oil Burning Fan.	1	4	1	"	35	"	60	"	"
Memo Pump.	1	1.5	1	7/044	13	31	100	"	"
Bridge Deck Vent Fan. P.	1	2.5	1	"	20	"	60	"	"
" " " " S.	1	3.4	1	"	30	"	60	"	"

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.

CAMPBELL & ISHERWOOD, LTD.

James Meade

Electrical Contractors.

Date *3rd Jan 1950*

COMPASSES.

Have the compasses been adjusted under working conditions... *Yes.*

WILLIAM DOXFORD & SONS, LIMITED.

James Gethog

Builder's Signature.

Date *6/1/50*

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

Is this installation a duplicate of a previous case... *Yes.* If so, state name of vessel... *M/V. "IRELYON"*

Plans. Are approved plans forwarded herewith... *No.* If not, state date of approval... *16.5.49.*

Certificates. Are certificates of test for motors engaged on essential sea 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 installed under special survey in accordance with the approved plans and the "Rules for Electrical Equipment." The materials and workmanship are good. Upon completion trials of the equipment were witnessed as satisfactory and the insulation resistance of all circuits was found good. This equipment is in my opinion suitable for a closed vessel.

Total Capacity of Generators. *(2x30) 60.* Kilowatts.

The amount of Fee ... *£48.0.0.* When applied for,

JAN 20 1950

When received,

Travelling Expenses (if any) £

J. B. Mansel
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute... *FEB 17 FEB 1950*

Assigned *In unli ser J. B. Mansel*

2m. 9.46.—Transfer. (MADE AND PRINTED IN ENGLAND.) (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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