

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office. MAR 26 1941

Date of writing Report. 10th March 1941. When handed in at Local Office. 25. 3. 41. Port of Glasgow.

No. in Survey held at Glasgow & Greenock. Date, First Survey 19. 3. 40. Last Survey 12th March 1941. Reg. Book. (Number of Visits. 1.)

87501 on the M.V. "CAPE HAWKE" Tons { Gross 5081 Net 2933

Built at Port Glasgow By whom built Lithgows Ltd. Yard No. 930. When built 1941

Owners. Lyle Shipping Co (Mars) Port belonging to Glasgow.

Electrical Installation fitted by W. Muir Goodfellow & Co Ltd. Contract No. 930. When fitted 1941

Is vessel fitted for carrying Petroleum in bulk. - 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. No, 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. Sindano. 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.

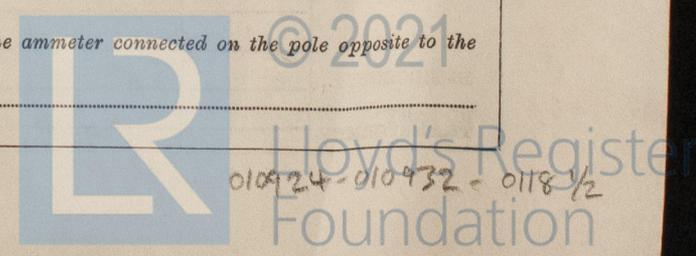
D.P. Switch and fuses.

D.P. c/o Switch 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. - Earth Testing, state means provided. Earth lamps.



Switches, Circuit Breakers and Fuses, are they as per Rule Y, are the fuses an approved type Y, are all fuses labelled as per Rule Y, are the reversed current protection devices connected on the pole opposite to the equaliser connection —, have they been tested under working conditions —.

Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule Y. Cables, are they insulated and protected as per the appropriate Tables of the Rules Y, if otherwise than as per Rule are they of an approved type Y, state maximum fall of pressure between bus bars and any point under maximum load 4.4/10/6, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets Y. 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 Y, are cables laid under machines or floorplates —, if so, are they adequately protected —. Are cables in machinery spaces, galleys, laundries, etc., lead covered Y or run in conduit —. State how the cables are supported and protected Main r.t.k. in galvanised conduit, engine room wiring pyrotex cable clipped, accommodation L.C. clipped.

Are all lead sheaths, armouring and conduits effectually bonded and earthed Y. 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 Y, where unarmoured cables pass through beams, etc., are the holes effectually bushed Y and with what material lead. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Y. Emergency Supply, state position — and method of control —.

Navigation Lamps, are they separately wired Y controlled by separate double pole switches Y and fuses Y. Are the switches and fuses in a position accessible only to the officers on watch Y, is an automatic indicator fitted Y. 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 Y. Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present —, if so, how are they protected —.

and where are the controlling switches fitted —, are all fittings suitably ventilated Y. are all fittings and accessories constructed and installed as per Rule Y. Searchlight Lamps, No. of —, whether fixed or portable —, are their fittings as per Rule —. 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 Y and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil Y, 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 Y. 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 —, 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 Y, are they suitably stored in dry situations Y. Insulation Tests, has the insulation resistance of all circuits and apparatus been megger tested and found satisfactory Y.

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ...	2	12	110	109	500	Steam engine		
EMERGENCY ...								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (load 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 ...	12	1	19/083	109	118.0	30	Rubber.	CONDUIT.
" " EQUALISER ...								
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTOR ...								
" " GENERATOR ...								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (load plus return feet).	INSULATED WITH.	HOW PROTECTED.
AUX. SWITCHBOARDS AND SECTION BOARDS ...						
CARGO S.B.	1	7/064	32	46	100	CONDUIT.

LIGHTING AND HEATING, ETC., CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (load plus return feet).	INSULATED WITH.	HOW PROTECTED.
WIRELESS ...		1	7/029	4.5	15	440 Rubber. CONDUIT.
NAVIGATION LIGHTS ...		1	7/029	5.0	15	440 " "
LIGHTING AND HEATING ...						
SALOON ACCOMM. DB.		1	7/052	20	37	370 " "
ENGINEERS " DB.		1	7/044	21	31	180 " "
CREWS ACCM. DB.		1	7/044	10	31	440 " "
ENGINE ROOM DB.		1	0225	30	75	60 PYROTEX
CARGO DB FORD		1	7/064	16	46	350 Rubber. CONDUIT.
" " AFT		1	7/044	16	31	160 " "

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (load plus return feet).	INSULATED WITH.	HOW PROTECTED.
REFRIG. MACH.	1	1	7/052	28	31.37	300 Rubber. CONDUIT.	
LUB. OIL PUMPS.	2	3.0	0225	27	75	200 PYROTEX CABLE	
AIR. BLOWER.	1	5.0	0225	42	75	300 " "	
FUEL PRIMING PUMP.	1	1.5	007	15	28	80 " "	

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.

For W. MUIR GOODFELLOW & COY LTD

Wm Goodfellow
Director

Electrical Engineers.

Date 22/3/41

COMPASSES.

Minimum distance between electric generators or ~~motors~~ and standard compass 104 feet

Minimum distance between electric generators or ~~motors~~ and steering compass 100 feet

The nearest cables to the compasses are as follows:—

A cable carrying 2 Ampères led into feet from standard compass led into feet from steering compass.

A cable carrying 5 Ampères 10 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 ✓

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 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.

LITHGOWS LIMITED.

John A. Fisher

Secretary Builder's Signature.

Date 21/3/41

Is this installation a duplicate of a previous case ✓. If so, state name of vessel M.Y. "CAPE CLEAR"

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, tested under full working conditions and found satisfactory. The material and workmanship are good.

Noted
J.Y.
27/3/41

Rob
25/3/41

Total Capacity of Generators 24 Kilowatts.

The amount of Fee ... £ 19 : 10 : 00 : 00 When applied for,
Travelling Expenses (if any) £ 7 : 3 : 00 When received.

J. G. Findlay
Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 25 MAR 1941

SEE ACCOMPANYING MACHINERY REPORT.

Assigned _____

2m.10.38.—Transfer. (MADE IN ENGLAND.)
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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