

Rpt. 13.

No. 15109

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

19 JAN 1951

Date of writing Report 28th Dec. 1950, When handed in at Local Office 9 Jan 1951, Port of Belfast

No. in Survey held at Belfast, Date, First Survey 28 Sept 1950, Last Survey 29 Dec 1950

Reg. Book No. 90810 on the M.V. "Kaganfield" (No. of Visits 14)

Built at Belfast, By whom built Messrs. Harland & Wolff, Yard No. 1418, Tons Gross 8196, Net 4735

Owners Messrs. Hunting & Sons Newcastle on Tyne, Port belonging to Newcastle, When built 1950

Installation fitted by Messrs. Harland & Wolff, When fitted 1950

Is vessel equipped for carrying Petroleum in bulk Yes, Is vessel equipped with D.F. Yes, E.S.D. Yes, Gy.C. Yes, Sub.Sig. No, Radar No.

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 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 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 Platform Engine Room Starboard

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 Sindanyo, 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. Circuit Breaker with O.L. & Time Lag

and the switch and fuse gear (or circuit breakers) for each outgoing circuit D.P. Change over switches with D.P. Fuses

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, Earth Testing, state means provided Earth Testing 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 50%, 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 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 4.9 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, if so, are they adequately protected Yes, Are cables in machinery spaces, galleys, laundries, etc., lead covered Pyrotex in Machinery Space or run in conduit, or of the "HR" type

State how the cables are supported or protected L.C.A.B. clipped to Plating secured to Bulkhead fore and aft gangway etc.

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

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

Navigation Lamps, are they separately wired Yes controlled by separate double pole switches 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 Is an alternative supply provided Yes

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

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

and where are the controlling switches fitted In Masterboard locker Amuships Are all fittings suitably ventilated Yes

Searchlight Lamps, No. of None, whether fixed or portable —, are they of the carbon arc or of the filament type —

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 and placed in well-ventilated compartments in which inflammable gases cannot accumulate and protected from damage from water, steam and oil Yes

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 — 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 sea 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 — 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 Yes, are all fuses of an Approved Cartridge Type Yes, make of fuse Siemens Btts. Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships Yes. Are the cables lead covered as per Rule Yes.

E.S.D., if fitted state maker Submarine Sig. Co. location of transmitter Engine Room D.B. Box and receiver Engine Room D.B. Box

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

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

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	MAKER.	RATED AT				PRIME MOVER.	
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN ...	1	Lawrence Scott	40	110	363	775	Diesel	Ruston & Hornsby
	1	Sunderland Forge	40	110	363	550	Steam	Sunderland Forge.
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 ... (Diesel)	40	1	9/093	363	384	44	VIR.	L.C.B.
" " EQUALISER ...								
" " (Steam)	40	1	9/093	363	584	62	VIR.	L.C.B.
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.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Shore Supply	1	2" Ref. 754/	—	314	120	Mineral	Copper
Masterboard	1	6/1103	244	332	420	V.I.R.	L.C.A.B.
Aft Accommodation Lighting S.F. Box	1	19/083	90	118	120	"	L.C.B.
Wireless	1	19/083	27	118	495	"	L.C.A.B.
Engine Room Lighting S.F. Box	1	0.4" Ref. 422/	70	110	75	Mineral	Copper
Oil Purifiers S.F. Box No. 19	1	0.3" Ref. 386/	60	92	150	"	Copper
Refug. Machinery	1	7/064	32	46	240	V.I.R.	L.C.B.
Workshop Motors S.F. Box No. 18	1	0.225" Ref. 349/	37	80	150	Mineral	Copper
Engine & Boiler Room Fans S.F. Box No. 14	1	0.4" Ref. 422/	26	110	105	"	Copper
Galley & Domestic Equip. S.F. Box No. 8	1	19/064	50	83	195	V.I.R.	L.C.B.

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.			
Sub Canal Projector Circuit	1	19/052	35	64	350	VIR	L.C.A.B.
Wireless	1	19/083	27	118	495	"	"
Fathometer Echo Sounding Gear	1	7/036	12	24	75	"	L.C.B.
Dist. Box No. 1 Navigation	1	7/044	15	31	75	"	"
" 2 Lighting Upper Bridge	1	7/044	24	31	54	"	"
" 3 Pantry Equip. Amuships	1	7/064	40	46	54	"	"
" 4 Lighting Lower Bridge	1	7/044	26	31	15	"	"
" 5 Lighting (Pump Rm. Service)	1	7/036	15	24	15	"	"
" 6 Lighting (Boat & Prop Decks)	1	7/052	33	37	135	"	"
" 7 Prop.	1	7/044	17	31	48	"	"
" 8 Pantry Equip. Aft	1	7/036	18.6	24	30	"	"
" 9 Lighting Fore	1	7/044	10	31	285	"	L.C.A.B.
" 10 Upper Stk. Pot	1	7/044	19	31	52	"	L.C.B.
" 11 Star.	1	7/044	18	31	60	"	"
" 12 Portable Instruments	1	7/036	9	24	15	"	"
S.F. Box No. 14 Engine & Boiler Rm. Fans	1	0.4" Ref. 422/	26	110	105	Mineral	Copper Sheath.
" 15 Engine Room Lighting	1	0.4" Ref. 422/	34	45	120	"	"
" 16	1	0.4" Ref. 422/	26	45	30	"	"
" 17	1	0.4" Ref. 422/	28	45	30	"	"
" 18 Workshop Motors	1	0.225" Ref. 349/	37	80	150	"	"
" 19 Oil Purifiers	1	0.3" Ref. 386/	60	92	150	"	"
Section Box No. 1 Aft Accom. Lighting	1	19/083	90	118	120	VIR	L.C.B.
" 2 Engine Room Lighting	1	0.4" Ref. 422/	70	110	75	Mineral	Copper Sheath

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.
Turning Motor	1	10	0.4" Ref. 422/	80	110	75	Mineral Copper Sheath.
F.W. Pump Aft.	1	1	7/029	10	15	140	VIR L.C.B.
F.W. Pump Amuships	1	1	7/029	10	15	105	"
Emergency Air Compressor	1	3	0.4" Ref. 422/	26	45	60	Mineral Copper Sheath.
F.O. Purifier No. 1	1	2 1/2	0.07" Ref. 407/	22	30	75	"
" No. 2	1	2 1/2	"	22	30	70	"
L.O. Purifier	1	2 1/2	"	22	30	20	"
Engine Room Crane	1	3	0.4" Ref. 422/	26	45	90	"
Ventilation Fan No. 1	1	3	7/044	26	31	54	V.I.R. L.C.A.B.
" No. 2	1	2	7/036	18	24	120	"
" No. 3	1	2	7/036	18	24	90	"
Galley Exhaust Fan.	1	2	3/029	3	5	70	"
Pantry Exhaust Fan.	1	2	3/029	3	5	42	"
Galley Range Blower	2	2	3/029	3	5	58	"
Kitchen	1	2	0.07" Ref. 407/	18	30	46	Mineral Copper Sheath.
Grinder	1	2	0.07" Ref. "	18	30	50	"
Drilling Machine	1	1 1/2	"	14	30	40	"
Refug. Compressor	1	5	7/064	47	46	240	VIR L.C.B.
" Pump	1	1	3/036	10	10	92	"
Engine Room Fan.	1	1.8	7/036	16	24	45	" L.C.A.B.
Boiler Room Fan.	1	1.8	7/036	16	24	45	"

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.....

Yes.



Builder's Signature. Date *3.1.51.*

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..... *21st. July 1950.*

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 fitted on board under special survey, tested under full working conditions and found necessary. Materials and workmanship are good.

Noted Euk 5/2/51

Total Capacity of Generators..... *80* Kilowatts.

The amount of Fee ... £ *52* : - : When applied for, *17/11 1951*

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

R.I. Luvichism.
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute..... *FRI. 9 FEB 1951*

Assigned..... *See F.E. mchey. spl.*

2m.9.49.—Transfer. (MADE AND PRINTED IN ENGLAND.) (The Surveyors are requested not to write on or below the space for Committee's Minute.)