

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

28 OCT 1943

Received at London Office.....

Date of writing Report... 18th Oct 43 When handed in at Local Office... 26 OCT 1943 Port of... Sunderland

No. in Survey held at... Sunderland Date, First Survey... 27th July Last Survey... 27 Oct 1943 Reg. Book... Suppt. (Number of Visits... 11)

37280 on the S.S. 'EMPIRE CAMP' Tons (Gross... 7052 Net... 4760)

Built at... Sunderland By whom built... Short Bros, Ltd Yard No... 477 When built... 1943

Owners... Ministry of War Transport Port belonging to... Sunderland

Electrical Installation fitted by... The Sunderland Engineering Co Ltd Contract No... 477 When fitted... 1943

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

Have plans been submitted and approved... Yes System of Distribution... Two wire main circuit Voltage of supply for Lighting... 110

Heating... Power... 110 Direct... Alternating Current, Lighting... Yes Power... Yes If Alternating Current state periodicity... Prime Movers,

has the governing been tested and found as per Rule when full load is suddenly thrown on and off... Yes Are turbine emergency governors fitted with a trip switch as per Rule... Yes

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... 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

Are the lubricating arrangements and the construction of the generators as per rule... Yes Position of Generators... Engine room airward aft on amidships, 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... Engine room airward side aft near generating sets 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... 'Ebonox' 'Sindamp', 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... Triple pole double throw knife switch with one pole for equalisation and double pole circuit breaker with overload trip on each pole and reverse current trip and for each outgoing circuit... Double pole or double pole double throw quick break knife switch and double pole fuse.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule... Yes Instruments on main switchboard... Three ammeters... Three voltmeters... synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the equaliser connection... Yes

Earth Testing, state means provided... Elamp connected to E through two fuses

Switches, Circuit Breakers and Fuses, are they as per Rule... Yes, are the fuses an approved type... Yes, are all fuses labelled as per Rule... Yes

If circuit breakers are provided for the generators, at what overload current did they open when tested... 350/80 A are the reversed current protection devices connected on the pole opposite to the equaliser connection... Yes, have they been tested under working conditions, and at what current did they operate... Yes 350

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

Cables, are they insulated and protected as per the appropriate Tables of the Rules... Yes, if otherwise than as per Rule are they of an approved type... Yes, state maximum fall of pressure between bus bars and any point under maximum load... 4.0 V, are the ends of all cables having a sectional area of 0.01 square inch and above provided with soldering sockets... Yes

Are paper insulated and varnished cambric insulated cables sealed at the ends... Yes



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... are cables laid under machines or floorplates... if so, are they adequately protected... Are cables in machinery spaces, galleys, laundries, etc., lead covered... or run in conduit... State how the cables are supported and protected... *W.E. cables run in pipe along side hatch scumming on deck and in heavy gauge reinforced conduit in machinery spaces. L.C. cables exposed to protected cable tray or H.B. cables run in wood sheds in refrigerating chambers; L.C. cables shipped to surface or to wood ground in access.*

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

Navigation Lamps, are they separately wired... controlled by separate double pole switches... and fuses... Are the switches and fuses in a position accessible only to the officers on watch... is an automatic indicator fitted... Secondary Batteries, are they constructed and fitted as per Rule... are they adequately ventilated... what is the 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... 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... are all fittings and accessories constructed and installed as per Rule... 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... and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil... if situated near unprotected combustible material state minimum distance from same horizontally... and vertically... Are motors coupled to oil fuel transfer and unit 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 services been supplied and the results found as per Rule... Control Gear and Resistances, are they constructed and fitted as per Rule... 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... Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships... Are the cables lead covered as per Rule... Spare Gear, if the vessel is for open sea service have spares been provided as per Rule... are they suitably stored in dry situations... Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory...

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT			Revs. per Min.	DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.			Fuel Used.	Flash Point of Fuel.
MAIN	3	83	110	300	640	Single cylinder steam engine		
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead 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 GENERATORS	3 x 33	1	37/083	300	296	49/3042	V.C.	L.C.
" EQUALISER		1	19/083		191	21/1521	do.	do.
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead 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.			
AUX. SWITCHBOARDS AND SECTION BOARDS							
Section Board Lane No. 1+2	2	19/064	134	2x83	460	W.E.	In pipe
Section Board Lane No. 3+4	2	19/064	134	2x83	460	do.	do.
Section Board Lane No. 5+6	2	19/064	134	2x83	130	do.	do.
Saloon Ltg. Section Board	1	19/083	47	118	420	do.	do.
Engine Room Ltg. Section Board	1	19/083	55	118	180	do.	do.

LIGHTING AND HEATING, ETC., CABLES.

DESCRIPTION.	No.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
WIRELESS	1	19/064	35	83	480	W.E. In pipe & L.C.
NAVIGATION LIGHTS	1	7/036	2	24	90	do. L.C.
LIGHTING AND HEATING						
Saloon & Cabin Ltg. etc.	1	7/036	8+6	31	2400	W.E. L.C.
Bridge Ltg. etc.	1	7/036	9	24	90	do. do.
Food Comp. Ltg. etc.	1	7/036	10	24	174	do. In pipe
Food Prep. Ltg. etc.	1	7/036	6	24	24	do. L.C.
Ball Room Ltg. etc.	1	7/036	4	24	90	do. do.
Refrigerator Ltg. etc.	1	7/036	4	24	90	do. do.
Hot Ltg. etc.	1	7/036	20	31	124	do. do.
Stokehold Ltg. etc.	1	7/036	17	31	240	do. do.
Oil Comp. Ltg. etc.	1	7/036	8	24	200	do. In pipe
Trunk Ltg. etc.	1	7/036	10	31	120	do. L.C.
Off Ltg. etc.	1	7/036	20	46	400	do. In pipe
Oil & Ltg. Comp. Room Ltg. etc.	1	7/036	24+8	37	3600	do. do.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
Roping. Lane No. 1+2	2	8 1/2	1	7/064	67	75	120/124 V.C. L.C.
Roping. Lane No. 3+4	2	8 1/2	1	7/064	67	75	108/150 do. do.
Roping. Lane No. 5+6	2	8 1/2	1	7/064	67	75	102/120 do. do.
Lifting. Cr. Pump	1	10	1	19/064	85	83	100 W.E. In pipe
Stokehold Roping	1	5	1	19/064	41	83	440 do. do.
Compressor Rm. Lane	2	1/2	1	7/036	3	24	5120 do. L.C.

