

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

SEP 1941

Date of writing Report June 28 1941 When handed in at Local Office July 5 1941 Port of Philadelphia  
 No. in Survey held at Lechester Pa Date, First Survey 10 March Last Survey 10 June 1941  
 Reg. Book. \_\_\_\_\_ (Number of Visits 7)  
 on the S/S STANVAC MELBOURNE Tons {Gross 10013  
 Net 6397  
 Built at Lechester Pa By whom built Sm 837 DD Co Yard No. 208 When built 1941  
 Owners Petroleum Shipping Co Ltd Port belonging to \_\_\_\_\_  
 Electric Light Installation fitted by Sm 837 DD Co Contract No. 208 When fitted 1941

**System of Distribution** 2 Wire mains 2 Wire branches  
**Pressure of supply for Lighting** 110 volts, **Heating** \_\_\_\_\_ volts, **Power** 230 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 \_\_\_\_\_  
**Generators**, do they comply with the requirements regarding rating \_\_\_\_\_, are they compound wound \_\_\_\_\_  
 are they over compounded 5 per cent. \_\_\_\_\_, if not compound wound state distance between each generator \_\_\_\_\_  
 Where more than one generator is fitted are they arranged to run in parallel \_\_\_\_\_, is an adjustable regulating resistance fitted in series with each shunt field \_\_\_\_\_  
 Are all terminals accessible, clearly marked, and furnished with sockets \_\_\_\_\_, are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched \_\_\_\_\_  
**Position of Generators** Starboard side engine room, are the lubricating arrangements of the generators as per Rule \_\_\_\_\_  
 is the ventilation in way of the generators satisfactory \_\_\_\_\_, are they clear of all inflammable material \_\_\_\_\_  
 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 \_\_\_\_\_  
 are their axes of rotation fore and aft \_\_\_\_\_  
**Earthing**, are the bedplates and frames of the generating plant efficiently earthed \_\_\_\_\_, are the prime movers and their respective generators in metallic contact \_\_\_\_\_  
**Main Switch Boards**, where placed On same flat with generators  
 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 \_\_\_\_\_  
 are they protected from mechanical injury and damage from water, steam or oil \_\_\_\_\_, 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 \_\_\_\_\_, is all insulation of high dielectric strength and of permanently high insulation resistance \_\_\_\_\_, if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micaite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework \_\_\_\_\_ and is the frame effectively earthed \_\_\_\_\_  
 Are the fittings as per rule regarding: — spacing or shielding of live parts \_\_\_\_\_  
 accessibility of all parts \_\_\_\_\_, absence of fuses on back of board \_\_\_\_\_, proportion of omnibus bars \_\_\_\_\_, individual fuses to voltmeter, pilot or earth lamp \_\_\_\_\_, connections of switches \_\_\_\_\_  
**Main Switchgear**, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches. 1600 Amp 3 pole  
CB. 1600 Amp 3 pole Non fused line switch  
**Instruments on main switchboard** 5 ammeters, 4 voltmeters, \_\_\_\_\_ synchronising device for paralleling purposes.  
**Earth Testing**, state what means are provided at the main switchboard for indicating the state of the insulation of the system Earth lamps  
portable high voltage ohm meter  
**Switches, Circuit Breakers and Fusible Cut-outs**, do these comply with the requirements of the Rules \_\_\_\_\_  
**Joint Boxes Section and Distribution Boards**, is the construction, protection, insulation, material, and position of these as per rule \_\_\_\_\_

**Cables:** Single, twin, concentric, or multicore. *all* are the cables insulated and protected as per Tables IV or V of the Rules. *Yes*

**Fall of Pressure,** state maximum between bus bars and any point of the installation under maximum load. *5%*

**Cable Sockets and other connections,** are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets. *Yes*

**Paper Insulated Cables,** If cables are paper covered, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound. *No paper insulation*

**Cable Runs,** are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage. *Yes*

**Support and Protection of Cables,** state how the cables are supported and protected.

If cables are run in wood casings, are the casings and caps secured by screws. *None*, are the cap screws of brass. *Yes* are the cables run in separate grooves. *Yes* If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII. *Yes*

**Refrigerated Chambers,** if lights are fitted, are the cables and fittings in accordance with the special requirements. *Yes*

**Joints in Cables,** state if any, and how made, insulated, and protected. *None*

**Watertight Glands and Deck Tubes,** are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands. *Yes*

**Bushes in Beams and Non-watertight Partitions,** where armoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed. *Yes* state the material of which the bushes are made. *Lead*

**Earthing Connections,** state what earthing connections are fitted and their respective sectional areas. *Yes*

are their connections made as per Rule. *Yes*

**Alternative Lighting,** are the groups of lights in the propelling machinery space arranged as per Rule. *Yes*

**Emergency Supply,** state position and method of control of the emergency supply and how the generator is driven. *None*

**Navigation Lamps,** are these separately wired. *Yes*, controlled by separate switch and separate fuses. *Yes*, are the fuses double pole. *Yes* are the switches and fuses grouped in a position accessible only to the officers on watch. *Yes* has each navigation lamp, an automatic indicator as per Rule. *Yes*

**Secondary Batteries,** are they constructed and fitted as per Rule. *None*

**Fittings,** are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight. *Yes* are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected. *None*

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected. *None*

how are the cables led. *Yes*

where are the controlling switches situated. *Yes*

**Searchlight Lamps,** No. of *1*, whether fixed or portable. *fixed*, are their fittings as per Rule. *Yes*

**Arc Lamps,** other than searchlight lamps, No. of *None*, are their live parts insulated from the frame or case. *Yes*, are their fittings as per Rule. *Yes*

**Motors,** are their working parts readily accessible. *Yes*, are the coils self-contained and readily removable for replacement. *Yes* are the brushes, brush holders, terminals and lubricating arrangements as per Rule. *Yes* are the motors, placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material. *Yes* are they protected from mechanical injury and damage from water, steam or oil. *Yes* are their axes of rotation fore and aft. *Yes* if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type. *Yes* *flame proof*, if not of this type, state distance of the combustible material horizontally or vertically above the motors. *Yes* and *Yes*

**Control Gear and Resistances,** are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule. *Yes*

**Lightning Conductors,** where lightning conductors are required, are these fitted as per Rule. *Yes*

**Ships carrying Oil having a Flash Point less than 150° F.** Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings. *Yes*

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office. *None supplied*

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	300	240	1565	1200	Steam Turbine		
AUXILIARY	1	50	240	260	1200	" "		
EMERGENCY								
ROTARY TRANSFORMER	2	25	110	260	1750	Compound wound motor		

LIGHTING AND HEATING CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR	2	2.0752	274	.103	1565	50	Karnish Camble Lead	Lead 9 armoured
	EQUALISER CONNECTIONS	1	1.0376	127	.103		50	"	"
	AUXILIARY GENERATOR	1	.1964	37	.083	260	20	"	"
	EMERGENCY GENERATOR	1	.200	37	.083	184	20	"	"
	ROTARY TRANSFORMER	1	.200	37	.083	260	20	"	"
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	1	.0600	19	.064	80	40	"	"
	BOILER	1	.007	7	.036	10	70	"	"
	ACCOMMODATION	1	.075	19	.072	100	120	"	"
	Compass	1	.0145	7	.053	15	575	"	"
	Talkometer	1	.0225	7	.064	20	175	"	"
	Off quarters upper deck	1	.0400	19	.052	75	180	"	"
	" " poop	1	.0400	19	.052	75	150	"	"
	Midship	1	.075	19	.072	100	500	"	"
	Boiler room	1	.0400	19	.052	75	80	"	"
	WIRELESS	1	.0225	7	.064	20	480	"	"
	SEARCHLIGHT								
	MASTHEAD LIGHT								
	SIDE LIGHTS	1	.007	7	.036	2.0	580	"	"
	Water heater	1	.0145	7	.052	27	180	"	"
	COMPASS LIGHTS								
	POOP LIGHTS								
	ARC LAMPS								
	HEATERS								

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	Galley range panel			37	.072	191.9	110		Lead 9 armoured
	Midship range panel		.0100	19	.052	9.4	500		"
	Machine room panel		.0225	7	.064	38.4	100		"
	EMERGENCY BILGE PUMP								
	Electric range	1	.0750	19	.072	97	20		
	Sawmill pump	1	.0100	7	.044	22	20		
	Stock Mangle	1	.0100	7	.044	22	60		
	Cold Sea Water Pumps	2	.0100	7	.044	22	60		
	Waste pump	1	.0070	7	.036	13	60		
	Air Compressor	2	.0030	1	.064	1.2	65		
	Refrigerator	1	.007	7	.036	8.7	50		
	Fresh Water Pump	2	.0030	1	.064	1.2	40		
	Food Warmers	1	.007	7	.036	8.7	40		
	ENGINE TURNING GEAR	1	.007	7	.036	8.7	40		
	Exhaust Blowers	2	.0030	1	.064	1.2	40		
	ENGINE REVERSING GEAR	1	.007	7	.036	8.7	40		
	Water heater	1	.0100	7	.044	27	40		
	LUBRICATING OIL PUMPS								
	OIL FUEL TRANSFER PUMP								
	Drinking water pump	1	.0030	1	.064	2.4	50		
	WIRELESS								
	Refrigerator	1	.0030	1	.064	1.2	20		
	WATER PUMP	1	.007	7	.036	8.8	40		
	WINCHES								
	STEERING GEAR								
	Waste less	1	.0030	1	.064	4.6	60		
	(a) Motor GENERATOR								
	Latch	1	.007	7	.036	12.6	50		
	(b) Main MOTOR								
	Waste Motor	1	.007	7	.036	12.6	40		
	Waste Motor	1	.007	7	.036	8.6	60		
	VENTILATING PANS								

Assigned

Im. 1.28-7 transfer. The surveys are requested not to write on or below the space for Committee's Minutes.

Committee's Minute

NEW YORK AUG 13 1941

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

Surveyor to Lloyd's Register of Shipping.

Total Capacity of Generators Kilowatts.

CARGO LIGHTS	...	...	...	...	...	...	...
ARC LAMPS	...	...	...	...	...	...	...
HEATERS	...	...	...	...	...	...	...

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. am. area.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	BALLAST PUMP <i>Eng room</i>	1	.0145	7	.052	39	130	Varnish? cambic	Leases? armored
	MAIN BILGE LINE PUMPS	1	.250	37	.093	294	100	"	"
	GENERAL SERVICE PUMP	2	.0145	7	.052	39	90	"	"
	EMERGENCY BILGE PUMP	1	.250	37	.093	275	150	"	"
	SANITARY PUMP	1	.0145	7	.052	30	90	"	"
	SEA WATER PUMPS	1	.040	19	.052	104	75	"	"
	CIRC. FRESH WATER PUMPS	1	.040	19	.052	58	150	"	"
	AIR COMPRESSOR	1	.0030	1	.064	2.4	130	"	"
	FRESH WATER PUMP	1	.0145	7	.052	30	160	"	"
	ENGINE TURNING GEAR	1	.0145	7	.052	39	80	"	"
	ENGINE REVERSING GEAR	2	.0145	7	.052	25	165	"	"
	LUBRICATING OIL PUMPS	2	.040	19	.052	58	170	"	"
	OIL FUEL TRANSFER PUMP	1	.15	37	.072	147	65	"	"
	WINDLASS <i>Forward</i>	2	.075	19	.072	94	120	"	"
	WINCHES <i>Forward</i>	3	1.1781	91	.1284	700	70	"	"
	WINCHES <i>Aft</i>	1	.007	7	.036	12.6	100	"	"
	STEERING GEAR—								
	(a) MOTOR GENERATOR								
	(b) MAIN MOTOR	2	.1478	37	.072	95	195	"	"
	WORKSHOP MOTOR	2	.200	37	.083	220	65	"	"
	VENTILATING FANS	2	.007	7	.036	4.6	55	"	"
	Boiler room Kent fan	1	.007	7	.036	4.6	160	"	"
	Lub oil purifier	1	.0032	1	.064	8.6	165	"	"
	Pump room	1	.007	7	.036	6.6	65	"	"
	Stx condensate	1	.0145	7	.052	30	60	"	"
	Well drain pump	1	.0030	1	.064	6.6	40	"	"
	Wash water	1	.0030	1	.064	4.6	130	"	"
	gen flat Kent fan	1	.0030	1	.064	1.2	25	"	"
	Ice machine	1	.0145	7	.052	30	170	"	"

All Conductors are of annealed copper conforming to British Standard Specification No. 7.  
 The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.  
 The foregoing is a correct description.

T. M. Jackson

Electrical Engineers.

Date June 30-41

COMPASSES.

Distance between electric generators or motors and standard compass 10'  
 Distance between electric generators or motors and steering compass 10'

The nearest cables to the compasses are as follows:—

A cable carrying 6.6 Amperes 10 feet from standard compass 10 feet from steering compass.

A cable carrying 1.5 Amperes 10 feet from standard compass 10 feet from steering compass.

A cable carrying \_\_\_\_\_ Amperes \_\_\_\_\_ 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 0° degrees on 360° course in the case of the standard compass, and 0° degrees on 360° course in the case of the steering compass.

T. M. Jackson

Builder's Signature.

Date June 30-41

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. *This electrical installation has been installed under Special Survey, and in accordance with the approval, the workmanship & materials are good. The installation has been tried out under full power & found satisfactory.*

*Notes*  
*30/9/41*  
 [Green stamp]

Total Capacity of Generators 650 Kilowatts.

The amount of Fee ... \$ 243.25 : When applied for, 12<sup>th</sup> July 41  
 Travelling Expenses (if any) £ 7.00 : When received, \_\_\_\_\_  
 19\_\_\_\_

M. W. Penham  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute NEW YORK AUG 13 1941

Assigned *Elec. light* *None*

Im. 1.26.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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