

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 20 June 1941 When handed in at Local Office 5 May 1941 Port of Philadelphia Received at London Office 9 JUL 1941

No. in Survey held at Chester Pa Date, First Survey 7 Jan Last Survey 19 March 1941
Reg. Book. (Number of Visits 4)

on the M/V ATLANTIC SUN Tons { Gross _____ Net _____

Built at Chester Pa By whom built Sum PB & DD Co Yard No. 212 When built 1941

Owners Sum Oil Co Port belonging to Philadelphia

Electric Light Installation fitted by Sum PB & DD Co Contract No. _____ When fitted _____

System of Distribution Two Wire Mains, Two 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 _____

Are the lubricating arrangements of the generators as per Rule _____

Position of Generators Engine Room flat - stb side

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 beds, laths and frames of the generating plant efficiently earthed _____, are the prime movers and their respective generators in metallic contact _____

Main Switch Boards, where placed Engine Room flat stb side

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 _____

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.

main generator 2 - 1600 amp 3 pole non fused line switch.

aux generator 1 400 " " " non fused line switch.

Reverse current overload trip.

Reverse current overload trip.

Instruments on main switchboard 3 ammeters 3 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 ground lamps

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 *Single Thin* 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 *None used*

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 *Cables laid in channel along fore & aft walkways, on cable racks elsewhere.*

If cables are run in wood casings, are the casings and caps secured by screws, are the cap screws of brass, are the cables run in separate grooves. If armored 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 *Continuous lengths*

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 *armored* cables pass through beams and non-watertight partitions, are the holes efficiently bushed *Yes* state the material of which the bushes are made *Cast lead*

Earthing Connections, state what earthing connections are fitted and their respective sectional areas *None*

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 where 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*

where are the controlling switches situated *Fixed*

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*, if not of this type, state distance of the combustible material horizontally or vertically above the motors *Yes*

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

Lighting 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 used*

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	300 each	240	1250	1200	Steam Turbine		
AUXILIARY	1	75	240	312	375	Revol Engine	Bunker C	350°
EMERGENCY								
ROTARY TRANSFORMER	2	25 each	110	208	1750	Electric 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	3.0	254	.103	1250	60	Kamish & Cambie	1600 A Cbr Breaker
	EQUALISER CONNECTIONS	1	1.0	127	.103	625	60	"	
	AUXILIARY GENERATOR	1	1.0	61	.093	312	80	"	375 A Cbr Breaker
	EMERGENCY GENERATOR	1	.150	37	.072	147	50	"	175 A Fuse
	ROTARY TRANSFORMER	1	.250	37	.093	208	50	"	275 A Cbr Breaker
	POP. DR. LED	1	.040	19	.052	70	150	"	60 A Fuse
	AUXILIARY SWITCHBOARDS	1	.060	19	.064	80	60	"	100 A "
	ENGINE ROOM UPPER DR. LED	1	.040	19	.052	80	100	"	60 A "
	ENGINE ROOM LOWER DR. LED	1	.040	19	.052	80	100	"	60 A "
	ACCOMMODATION MIDSHP. LED	1	.075	19	.072	100	550	"	60 A "
	Navigation Ltg	1	.010	7	.044	3.15	550	"	20 A "
	Pachometer	1	.022	7	.064	10	550	"	30 A "
	Gyro Compass	1	.045	7	.052	6	500	"	30 A "
	WIRELESS	1	.0225	7	.064	40	500	Kamish & Cambie	45 A Fuse
	SEARCHLIGHT								
	MASTHEAD LIGHT								
	SIDE LIGHTS								
	COMPASS LIGHTS								
	DECK LIGHTS								
	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. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	LATHE	1	.0082	1	.064	8.6	32	Kamish & Cambie	10 A Fuse
	DRILL PRESS	1	.0032	1	.064	4.6	20	"	10 A "
	Main Bilge Line PUMPS	1	.0032	1	.064	4.6	20	"	10 A "
	GRINDER	1	.007	7	.036	12.6	40	"	15 A "
	General Service Pump	1	.0032	1	.064	2.0	40	"	10 A "
	Emergency Bilge Pump	1	.0032	1	.064	2.0	40	"	10 A "
	SHAPER	1	.007	7	.036	12.6	40	"	15 A "
	SANITARY PUMP	1	.0032	1	.064	2.0	40	"	10 A "
	VENT. BLOWER	1	.0032	1	.064	3.5	40	"	10 A "
	Cold Sea Water Pumps	6	.0284	19	.044	43.9	150	"	40 A "
	MACHINE SHOP POWER								
	Cold Sea Water Pumps								
	COFFEE URN		.0032	1	.064	10	80	"	10 A "
	Air Compressor		.0032	1	.064	8	80	"	10 A "
	COFFEE URN		.0032	1	.064	8	80	"	10 A "
	ENGINE WATER PUMP		.0032	1	.064	8	80	"	10 A "
	GRIDDLE		.007	7	.036	18.2	40	"	20 A "
	ENGINE TURNING GEAR		.0032	1	.064	8	60	"	10 A "
	COFFEE URN		.0032	1	.064	8	60	"	10 A "
	ENGINE TURNING GEAR		.0032	1	.064	8	60	"	10 A "
	WATER HEATER		.0032	1	.064	8	60	"	10 A "
	LUBRICATING OIL PUMPS		.0146	7	.052	22.7	40	"	25 A "
	STEAM KETTLE		.0146	7	.052	22.7	40	"	25 A "
	Oil Pump		.0146	7	.052	22.7	40	"	25 A "
	BAKE OVEN		.0396	19	.052	65.0	40	"	70 A "
	RANGE NO 1		.0396	19	.052	65.0	40	"	70 A "
	WATER FORWARD		.0396	19	.052	65.0	40	"	70 A "
	RANGE NO 2		.0396	19	.052	65.0	40	"	70 A "
	WATER AFT		.0396	19	.052	65.0	40	"	70 A "
	DISH WASHER	1	.0032	1	.064	3.5	40	"	10 A "
	WATER AFT	2	.0032	1	.064	2.0	60	"	10 A "
	BLOWERS	2	.0032	1	.064	2.0	60	"	10 A "
	GALEY POWER PANEL	3	.1964	37	.083	233	160	"	200 A "
	WORKSHOP MOTOR								All cables protected with lead armor
	VENTILATING FANS								

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 May 5-41
Sun Shipbuilding & Dry Dock Co.

COMPASSES.

Distance between electric generators or motors and standard compass 30'
Distance between electric generators or motors and steering compass 30'

The nearest cables to the compasses are as follows:—

A cable carrying .09 Ampères on feet from standard compass on feet from steering compass.
A cable carrying .9 Ampères 6 feet from standard compass 6 feet from steering compass.
A cable carrying 1.3 Ampères 6 feet from standard compass 6 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 NW course in the case of the standard compass, and 0 degrees on NW course in the case of the steering compass.

T. M. Jackson
Sun Shipbuilding & Dry Dock Co. Builder's Signature. Date _____

Is this installation a duplicate of a previous case Yes If so, state name of vessel AMERICA SUN.

General Remarks (State quality of workmanship, opinions as to class, &c.)

This installation has been satisfactorily installed on board the vessel in accordance with the approved plan. The workmanship & materials are good. The installation has been tried out under full power & found satisfactory.

Noted
L. J.
14/7/41.

Total Capacity of Generators 675 Kilowatts.

The amount of Fee ... \$27:00 : { When applied for, 15-May-1941
Travelling Expenses (if any) \$ 4:00 : { When received, 19

W. W. Cumham
Surveyor to Lloyd's Register of Shipping.

Committee's Minute NEW YORK MAY 28 1941

Assigned Elec. light.

Im. 1.20.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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