

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report 10th Nov. 1948 When handed in at Local Office 10th Nov. 1948 Port of CARDIFF

Survey held at CARDIFF Date, First Survey 26.8.48 Last Survey 3.11.48 (Number of Visits 4)

on the S.S. ST JESSICA Tons { Gross 5420 Net 3322

Built at HOG ISLAND PA By whom built AMERICAN INTERNATIONAL S.B. CO Yard No. 1491 When built 1920

Owners ST QUENTIN SHIPPING CO LTD Port belonging to NEWPORT

Electrical Installation fitted by AMERICAN INTERNATIONAL S.B. CO Contract No. ~ When fitted 1920

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

Have plans been submitted and approved No System of Distribution TWO WIRE SYSTEM Voltage of supply for Lighting 110

Lighting Power Direct or Alternating Current, Lighting DC Power DC If Alternating Current state periodicity Prime Movers,

As 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 Generators, are they compound wound YES, are they level compounded under working conditions YES,

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 and the results found as per rule Are the lubricating arrangements and the construction

of the generators as per rule YES Position of Generators MIDDLE PLATFORM RECESS (STARBOARD SIDE)

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 MIDDLE PLATFORM RECESS (STARBOARD SIDE)

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 SLATE, if of synthetic insulating material is it an Approved Type, if of

semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule YES 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

TWO - 3 POLE QUICK BREAK KNIFE SWITCHES FOR EQUALISING COMPLETE WITH DOUBLE POLE CIRCUIT BREAKERS

and for each outgoing circuit DP QUICK BREAK KNIFE SWITCHES

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule YES Instruments on main switchboard 2

ammeters 1 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 EARTH LAMPS (EXCEPT CIR/BREAKERS)

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 N° 2 Fuses are the reversed current

protection devices connected on the pole opposite to the equaliser connection NONE FITTED, have they been tested under working conditions, and at what current

did they operate 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

state maximum fall of pressure between bus bars and any point under maximum load, are the ends of all cables having a sectional area of 0.04

square inch and above provided with soldering sockets YES Are paper insulated and varnished cambric insulated cables sealed at the 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. **YES**, are cables laid under machines or floorplates. **YES**, if so, are they adequately protected. **YES**. Are cables in machinery spaces, galleys, laundries, etc., lead covered or run in conduit. **YES**. State how the cables are supported and protected. **IN CONDUIT CLIPPED TO BULKHEADS**

Are all lead sheaths, armouring and conduits effectually bonded and earthed. **YES**. Refrigerated chambers, are the cables and fittings as per Rule. **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 and with what material. **Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule. YES. Emergency Supply, state position. NONE** and method of control.

Navigation Lamps, are they separately wired. **YES** controlled by separate double pole switches. **YES** 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**. Secondary Batteries, are they constructed and fitted as per Rule. **YES**, 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. **YES**. Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present. **NONE**, 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 **NONE**, whether fixed or portable.

are their fittings as per Rule. Heating and Cooking, is the general construction as per Rule. **NONE**.

are the frames effectually earthed. are heaters in the accommodation of the convection type. **Motors, are all motors constructed and installed as per Rule. YES** and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil. **YES**, 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. **YES**. Lightning Conductors, where required are they fitted as per Rule. **SEELMASTS 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. **YES**, are they suitably stored in dry situations. **YES**. Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory. **(SEE HULL REPORT NRS 4434)**

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATORS	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	1	35	110	320	550	STEAM		
	1	15	120	125	425	STEAM		
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULA-TED 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.			
1 MAIN GENERATOR	35	1	6/103	320	332	24	V.I.R.	ARMOURED & LEAD
2 " " EQUALISER	15	1	37.083	125	194	30	V.I.R.	IN CONDUIT.
1 " " EQUALISER			6/103					
1 " " "			37.083					
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULA-TED 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							

LIGHTING AND HEATING, ETC., CABLES.

DESCRIPTION.	No.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULA-TED WITH.	HOW PROTECTED.
			In the Circuit.	Rule.			
WIRELESS	1	19.064	15	23	340	V.I.R.	IN CONDUIT
NAVIGATION LIGHTS	1	7.036	4	24	340	Do	Do
LIGHTING AND HEATING							
ENGINE ROOM & BOILER ROOM	1	7.064	36	46	10	Do	Do
PORT SIDE ACCOMMODATION	1	7.064	19	46	150	Do	Do
STARBOARD	1	7.064	12	46	180	Do	Do
MIDSHIP	1	7.064	23	46	230	Do	Do
FORGE & CARGO LIGHTS	1	7.036	12	24	460	Do	Do
POOD	1	7.036	22	24	280	Do	Do

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	H.P.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULA-TED WITH.	HOW PROTECTED.
				In the Circuit.	Rule.			
L.O. PURIFIER	1	25	7.064	21.3	46	40	V.I.R.	IN CONDUIT

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 Engineers. Date

COMPASSES.

Minimum distance between electric generators or motors and standard compass 100 FEET

Minimum distance between electric generators or motors and steering compass 110 FEET

The nearest cables to the compasses are as follows:—

A cable carrying 6 Ampères 5 feet from standard compass 5 feet from steering compass.

A cable carrying 3 Ampères 5 feet from standard compass 5 feet from steering compass.

A cable carrying 1 Ampères 5 feet from standard compass 5 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 22 degrees on course in the case of the standard compass, and 21 degrees on course in the case of the steering compass.

Builder's Signature. Date

Is this installation a duplicate of a previous case YES If so, state name of vessel SS GUST CONCH REPORT NO 3043

Plans. Are approved plans forwarded herewith NO If not, state date of approval

Certificates. Are certificates of test for motors engaged on essential services and generators forwarded herewith

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.)

The electrical installation of this vessel was built under the survey and to class of the American Bureau of Shipping. The installation has been specially examined and megger tested in way of repair referred to in Hull Rep No 54818 and now completed. The installation found to be in accordance with the Rules except that the double pole circuit breakers are not fitted with reverse current trips. In view of the fact the 35 KW generator is of ample capacity for all loads, and 15 KW generator is used as a standby machine only, it is submitted that this present arrangement could be accepted in this case.

The installation has been examined under working conditions & governor gear tested with satisfactory results.

In my opinion the installation is such as could be accepted by the Committee for classification.

Total Capacity of Generators 50 Kilowatts.

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

Thomas Donaldson.
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 28 JAN 1949

Assigned See minute on file

5m. 4.38.—Transfer. (MADE AND PRINTED IN ENGLAND.)
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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